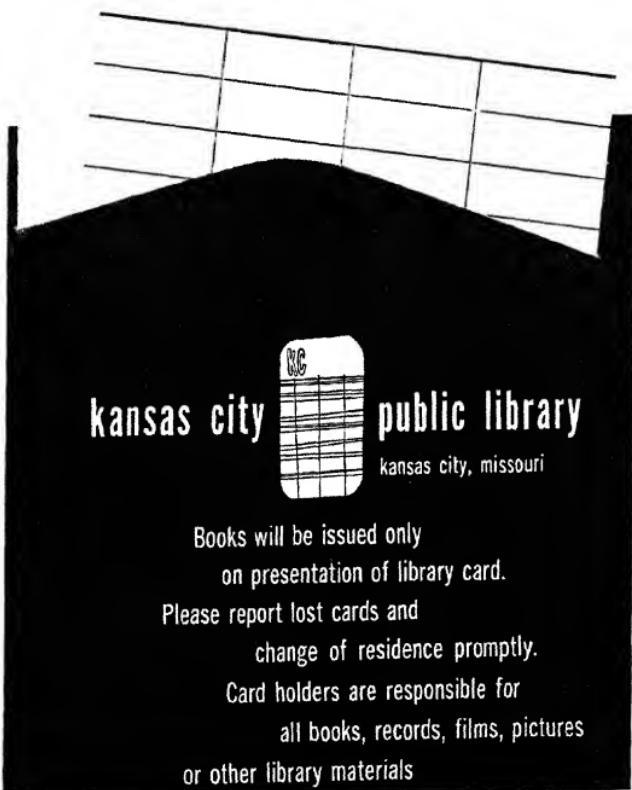




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From the ground up



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FROM THE GROUND UP

*By A. R. POWYS*

*Repair of Ancient Buildings*

*The English Parish Church*

*The English House*





*Vandyk*

A. R. POWYS

# FROM THE GROUND UP

Collected Papers of

A. R. POWYS

*Architect, Writer, and Secretary of the Society  
for the Protection of Ancient Buildings*

1882-1936

*With an Introduction by*  
JOHN COWPER POWYS  
*and two Photographs*

LONDON

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## INTRODUCTION

THE essays from my brother's hand in this admirable selection from his occasional writings are certainly most happily chosen as far as the essential thing is concerned, the revelation of the true nature and character of the man. And in the words 'From the Ground Up' the character is justly summarized.

In the case of so many artists and writers there appear gaps and spaces, and often quite disturbing 'lacunae,' between the work and the man. The extreme reverse of this occurred always in my brother's case; for it was a passionate matter of conscience with him, as well as an irresistible congenital impulse, not to deviate the breadth of an eyelash from the inspiration, the purpose, the opinion, the method which had come into being as the expression of his whole nature.

It was this almost ferocious integrity that gave to his opinions, however lightly expressed, a burden of authority that his interlocutors would have often found crushing if it had not been for a

quite startling wave of disarming self-depreciation that reached them from A. R. P.'s deepest soul even at the moment when he was 'confounding the politics' and 'frustrating the knavish tricks' of their less integral and more wayward arguments.

And it was this profound self-depreciation, mingled with the sort of pride that is driven in the necessity of conflict to put its back to the ultimate wall, that made his opinions—and make them still—so formidable.

A. R. P. was totally unable to 'show off.' Into the most negligible and trivial aspects—as others might regard them—of the aesthetic problem he would throw his whole self, often in a manner that was disconcerting.

On the other hand—and he lived both in his private and public life in an atmosphere charged with aesthetic controversy—I have never known any mortal person who could keep his temper as he did in the heat of these ticklish debates. The truth is, he loved argument. He loved it much as did the Platonic Socrates; and I suspect for the same reason. It enabled him to settle *down* and to settle *in* and to settle *back*, until it was not so much A. R. P. arguing 'from the ground up,'

as *the Ground itself* huskily defending a champion who, austerer than the rest of us in his respect for his subject, had argued barefoot.

A peculiar pride and a peculiar humility were most subtly fused together in his emotion as an artist, and in his temper as a critic of art. In the presence of the materials of his art, in contact with the textures of wood and stone and brick and cement and lead and steel, he lost his identity as a particular person and became All Men, All Men in contact with the work of All Men's hands !

Nothing my brother hated more than what might be called the 'artistic.' This distaste he assuredly inherited from our father whose *bête noir* in life was anything affected, or, as we say, 'put on'; and the whole secret of A. R. P.'s architectural doctrine, or, as he would probably have preferred me to put it, *method*, was to deduce what we call 'beauty' from the line of least resistance in practical common sense.

There was something classic in his personal appearance, suggestive, though he would scold me for introducing such a fancy, of a far-drawn mixture of Roman blood in the paternal Welsh strain, and I can well recall when I was with him in Rome how thrilled he was, beyond anything

else in the surviving Imperial masonry, by the Roman use of concrete.

Any skilful alliance between architecture and engineering stirred a deep interest in him, and his constant desire to allow beauty to emerge inevitably from an economic use of practical materials, rather than to be superimposed as an artistic afterthought, dominated both his own work and his criticism of the work of others. Dogmatic though his opinions often sounded—earning him the name among ourselves of ‘Brother Positive’—their actual drift was not so much in the direction of startling individualistic achievement as of anonymous creation, springing like the spirit that built the Gothic cathedrals, from a spontaneous movement ‘in widest commonalty spread.’

Far more nervously organized than in his pride and humility he allowed to appear, his habitual gesture of self-defensive toughness, the brave front he assumed to cope with the world, overlaid a psychological sensitivity that must often have been outraged beyond what any of us guessed; and, both as a soldier in the war and as a ‘shock’ fighter for the Society he served, he must have often lived, as we say, on his ‘nerves’ when he was apparently drawing upon unbounded resources of physical vitality.

This inner sensitivity, concealed beneath his blunt and rugged exterior, must have got deep comfort and support—like Antaeus touching the earth—from his power of sinking his individuality in the anonymous creative urge of his race; and it was in this way that, when driven back to the bed-rock of their origin, what looked like obstinate personal opinions became the ‘securus judicat orbis terrarum’ of something more infallible than any private judgment.

He was essentially a craftsman. In all his instincts it was the handling of the ‘given’ materials—materials ‘given’ by the particular conditions of ‘the work in progress’ and their exigencies in economy and convenience—that dominated the nature of the structure, and made way for the spontaneous evocation of the special kind of ‘beauty’ which springs from an organic adaptation of means to ends.

An artist in the most necessary of all arts—the art of housing humanity and its gods—he found himself handicapped by the grand necessity from which other artists are comparatively, though of course not entirely free, the necessity of ‘orders’ to fill, and of place, time, money, opportunity to fill them.

In this aspect of his work, wherein an architect, so much more than a painter or a writer—though, heaven knows, none of us can boast complete immunity—is dependent on sympathetic patrons, my brother lacked the worldly push and the social plausibility to climb with deft assurance ambition's ladder.

Here—and especially in the realm that interested him most, namely, the building of convenient modern houses with cheap materials—his vast stores of original energy and practical knowledge were allowed to lie unused.

But the inspired power of self-effacement that existed behind his formidable dogmatism found a truly predestined scope in his work for the Society for the Protection of Ancient Buildings.

The 'beauty' that he was always fighting for, the 'beauty' that arises inevitably *from the ground up* where designer, builder and craftsman are honestly working within the limits of economic necessity, the 'beauty' that is not only local, racial, indigenous, but is adaptable to the newest modern uses of iron and concrete and to the providing of inexpensive homes for the people of this land, was the same 'beauty'—so much more than the artistic experiments of individual genius—

that the old churches, houses and bridges of England had supplied to our fathers.

It is T. S. Eliot, I think, who suggests somewhere very truly that in the matter of poetry you have to consider the continuity of the past with the present and with what they both carry forward into the future ; and it seems to me that what my brother saw more clearly than many artists is that it is a petty and ignoble fastidiousness to be prepared to sacrifice the new life-necessities of vast numbers of our fellow-countrymen for the sake of expensive quietness and the exclusive charm of the picturesque.

But the bulk of the old buildings he fought to save from the ruin decreed to them by stupidity and rapacity were buildings that had been as obedient to the natural economies of materials and the communal necessities of our people as the most unpicturesquely convenient houses of our own day.

Just as he arrived at the solid and compact integrity of his personal character by the habitual suppression of an almost morbidly nervous sensibility, so he arrived at this massive and resolute sublimation of what one might call the 'arts and crafts' element in him, into an attitude that was contemptuous of the merely 'artistic' and

passionately sympathetic towards the hugest and most utilitarian alliances between architecture and engineering.

‘The great question,’ my brother says in his *The English House*, ‘what kind of house will man build for himself in the near future—may well, and perhaps wisely, be answered in the following way. In towns, where there is danger of fire, it seems that the permanent materials will be used. Houses will be built in the style that will result from the use of ferro-concrete when many are built together at one time. Where they are single buildings erected at the cost of the owner, they will for many years continue to follow on old-established lines, with slated roofs, walls of brick, with casement or sash windows. In the country, unless the house is at the order of a rich man who can afford to live in and pay rent for a house built of monumental materials, man will demand houses of the semi-temporary type, cheaply framed and made weather-resisting with the products of factory mass-production. Up till now architects have scorned to give time to an examination of these houses except to ban them. It may be that before long a missionary of this manner of building will arise and gain a following among the younger architects.

It certainly appears that this type of house deserves the careful study of a man such as Philip Webb. Englishmen live in them, and for some time, at least, will continue to live in them. How is it, then, that no English architect, with a right appreciation of the energy and invention of the past, has yet appeared to give to his brothers and sisters homes of this type that will not shame the land of his birth nor the long tradition of common sense and beauty on which was based that pleasant building—the English house ?'

It was in 1929 that my brother asked that question ; a question to which had he lived, and had he been given an opportunity, his own work would have been the answer. His plans are here. As he so well says, the hour has come when really great architects 'with a right appreciation of the invention and energy of the past' should turn their genius away from the 'monumental' work that necessitates wealthy individual patrons, and concentrate it on giving to the 'mass-production' houses of low rent that 'beauty' of well-designed economized materials which has a sounder basis—because of its more pressing necessity—than any expensive æsthetic experiment.

In other words, my brother saw a time coming

when what in my youth used to be designated 'Jerry-built houses' will be given, *in spite of their cheap materials*, the 'beauty' that naturally must follow any wisely considered satisfaction of a universal human need.

His work for the protection of old buildings—and how well I remember the tone in which I heard him say once, 'Anything *can* be mended; anything can be saved!'—brought him into 'bare-faced' touch, so to speak, with every kind of material, so that it was out of a born craftsman's mania for natural materials *for their own sake* that he evolved his reasoned acceptance of the manufactured materials of modern economic building.

With many architects their art is something detached from their individual character—a 'profession,' in fact, rather than an art; but with A. R. P. the art of architecture was only the outward expression in one set of materials of a habitual handling of every smallest detail of his personal life in the spirit of an assured craftsman. We used to laugh at him for the weightily banked-up *convictions*—for they were always more than fluctuating opinions—which he held with such dogmatic positivity on the tiniest of domestic and personal matters and the ways of doing or *not* doing

things. Nothing in his life was at random. Nothing was wanton or wilful. Nothing was left to the whim of the moment. In dress, in ablution, in food, in drink, in the minutest arrangements of his time, of the objects round him, of his rooms, of his garden, of his household utensils, in lighting a fire, in opening a bottle, in whittling a stick, in driving a nail, in hanging a picture, in washing a dish, in chopping a log, in cutting a loaf, he would always follow a carefully considered method of his own, for which when challenged—and you may be sure that in our lively and critical family he was challenged at every turn—he would bring forth a most confounding and irrefutable weight of elaborate justification.

And yet even in the heat of such self-championings—and it was almost always his opponent and not he who lost his temper—he would often display a depth of interior humility that was at once disarming and disconcerting. Indeed, if I am not greatly mistaken, his concealed self-depreciation was as much an integral part of his nature as his emphatic positivity.

He would frequently express a cautious, moderate, unexaggerated view with such a weight of volcanic authority that this harmless well-balanced

conclusion bowled you out with the shock of a pistol-shot.

The bulk of his life's work lies where he would have had it lie, in the silent and unapplauding masonry and timber of the irreplaceable buildings he saved from ruin; and we who miss him most feel that in a sense beyond what is possible for those whose days have divorced them from the things that outlive us, his spirit has obtained a congenial perpetuity, as it rises 'from the ground up,' imperishable and positive still, out of the substance of all it rescued from dissolution.

J. C. P.

*November 1937*

## ACKNOWLEDGMENTS

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## CONTENTS

	PAGE
INTRODUCTION, BY J. C. POWYS . . . . .	v
WESTMINSTER CATHEDRAL AND ITS ARCHITECT . . . . .	1
BUILDINGS IN THE KINGSWAY . . . . .	8
WATERLOO BRIDGE (1924) . . . . .	17
WATERLOO BRIDGE (1925) . . . . .	21
ADVICE TO THOSE WHO ARE GOING TO BUILD A HOUSE . . . . .	25
DR JOHNSON ON A THAMES BRIDGE . . . . .	32
ARCHAEOLOGY AND ARCHITECTURE . . . . .	35
TRADITION AND MODERNITY . . . . .	43
THE REVIVAL OF CHRISTIAN ARCHITECTURE . . . . .	51
REAL ENGLAND AND HOUSING . . . . .	60
LETHABY'S 'WESTMINSTER ABBEY' . . . . .	70
BEAUTY HELD TO RANSOM . . . . .	78
REVIEW OF 'LAWRENCE WEAVER,' BY CLOUGH WILLIAMS-ELLIS . . . . .	82
ORIGINS OF BAD ARCHITECTURE . . . . .	86
JOHN RENNIE, F.R.S., THE DESIGNER OF WATERLOO BRIDGE . . . . .	122
UPON THE MAKING OF AN ARCHITECT . . . . .	131
IN PRAISE OF LIMEWASH . . . . .	139
SURFACE TREATMENT OF OLD CHURCHES . . . . .	141
THE PRESERVATION OF ANCIENT BUILDINGS . . . . .	159

## ILLUSTRATIONS

A. R. POWYS . . . . . *Frontispiece*

AT A TWELFTH-CENTURY TOWN IN GERMANY

*Facing page 142*

## WESTMINSTER CATHEDRAL AND ITS ARCHITECT

IF one listens to a conversation between architects at the present day, one criticism is almost certain to occur, and if the architects are of different opinions it will be used with forcible contempt. The criticism referred to is the following : 'That building is merely scene-painting !' and it is often countered by some expression of this kind : 'Do you think, then, that the bones of a building should show like those of a lean horse ?'

In opening a series of articles on architecture these two aspects are mentioned, as they will be likely to recur. They represent in a sort of way the ruling thought that underlies design at the present day. The charge that buildings are mere scene-paintings is more common in a city than it is in the country, and this is almost inevitable because a street front presents to the public a single wall, whereas in the country a building stands out complete from all sides. The temptation for an architect is to build a street front as a piece of

decoration, rather in the way one papers the walls of a room. As a successful example of scene-painting the reader is referred to Australia House in the Strand.

In this self-conscious age it is almost impossible to build in a perfectly natural manner. In the best periods a single tradition was well understood—no alternative was thought of. It was then the business of the architect to add slight improvements to it. He worked with a limited variety of material and knew only a limited variety of forms. It was under these conditions that the fine mediaeval buildings were produced in Western Europe and that the wonderful architecture of the Greeks grew to perfection. But to-day, with an almost unlimited variety of materials and wide knowledge of the forms of every country and of every age, our difficulty is very much increased, and it is owing to this that so little spontaneous or natural architecture appears. The building in London which more nearly approaches the best works of architecture in any age—in fact, it has a value equal to the best work of any age—is Westminster Cathedral.

There is no reason to doubt that this is the most important work of architecture that has been pro-

duced in England since St Paul's was built. It is a comprehensive whole. The structural lines are seen on the outside and inside and are clothed with a beauty of decoration in a manner not equalled in any other modern building. It is presumption, in the face of such a magnificent work, to offer any criticism. One can only wonder what would have been the result had other materials been used in certain cases. For instance, the brickwork on the inside, although it is not yet clothed in the way which it is intended, has such a fine quality of colour and texture that one almost fancies that the outside might have been improved had brick of the same nature been used instead of the red facings. A common criticism that one hears made by people in talking of this building is that they do not like the stripes of stone which show everywhere on the outer surface, but these serve a very good purpose, for they define clearly, as seen in perspective, the plan of the individual parts. They bind the building from end to end into a whole.

If any works can be called inspired, this building is certainly one among the number. There is no scene-painting about it. It would have seemed impossible to men who knew Bentley from his earlier works only, that he should have produced a

building of this quality. It is not intended by this sentence that anyone should think that his early works do not show a very great knowledge of architecture and technical skill. But while they are equal to the works of the best of his contemporaries, they do not so far outreach them as to lead the observer to expect anything so great as the Cathedral. On pp. 6 and 7 the reader will find a list of his more famous works, which is made from *Westminster Cathedral and its Architect*, by Winefride de L'Hôpital, and among these perhaps the best known to the Londoner is the Seminary at Hammersmith. The general plan of this building, with the two courtyards and the low wall to the street and low cloister between the inner and outer courts, is very skilful, for while it excites the imagination about the part that is hidden, it enables everyone who passes it to see the fine range of chimneys which are placed on the inner walls of the courtyard and the two bay windows on its far side. The Seminary stands in the Hammersmith Road and is flanked by roads on either side of which stand small houses and similar buildings. Walking down one of the side roads towards Hammersmith Broadway for the first time one is unaware that a building of such distinction is in the neighbourhood. Yet, directly

you see the gables and chimneys of Bentley's work appearing between the lower buildings, two facts are recognized. First, that the small pieces of work which you see as isolated fragments belong to a single and much greater conception ; and second, if you have ever seen the building from the main road you know at once that they could belong to no other building. So well is the building designed that a small part of it gives an immediate impression of the scale and feeling of the whole, just as the hand betokens the man to whom it belongs. It is this relationship of parts that is so successful in all Mr Bentley's work. Anyone who visits Hammersmith to see the Seminary should not fail to walk down these side streets.

Reference has already been made to the book by Winefride de L'Hôpital lately published by Hutchinson's. Those who are interested in Bentley's work should study it. The plates it contains, both of his buildings and furniture, are good. His early works are examples of the Gothic manner which it is to-day the custom to condemn, and this fact should go far to make people more careful before giving judgment on this style. The fittings he designed show a marvellous knowledge of material and a perfect delicacy of touch.

## A LIST OF SOME OF BENTLEY'S WORKS

- 1875. St Mary's, Cadogan Street, with a hanging rood designed late in life.
- 1881. Our Lady of Holy Souls, Kensal Rise.
- 1886. Corpus Christi Church, Brixton.
- 1879. Holy Rood, Watford.
- 1897. St Luke's, Chiddingtonstone Causeway.

*Alterations to Churches*

- 1876. Chapel of Relics. St Mary of the Angels, Bayswater.
- 1874-1900. The Apse at Church of the Assumption, Warwick Street, West.
- 1883. The Shrine of Our Lady of Perpetual Succour.
- 1898. The South Chapel of Butterfield's Church, St John, Hammersmith.
- 1898. The Church of the Convent of the Immaculate Conception, Braintree, Essex.
- 1899. The Screen of St Ethelreda's, Ely Place.

*Domestic*

- 1885. Bainbridge Works (a Cottage).
- 1889. Glenmuire, Ascot.
- 1876-88. The Seminary, Hammersmith.
- 1888. Preparatory School, Beaumont.
- 1893. Redemptorist Monastery, Clapham.

## BUILDINGS IN THE KINGSWAY

KINGSWAY would have been a finer thoroughfare had it been made ten years later than it was. The earlier buildings are for the most part poor. Notable exceptions to this statement are No. 42 by Sir Edwin Lutyens, and the Church of Holy Trinity by Messrs Belcher & Joass, though the latter might by some be described as an example of architectural bluff, so different is the simple interior from what the street front suggests. A gradual improvement may be noticed in the later buildings which has in the end given us Africa House and the Bush Terminal block of offices.

To judge the street fairly one must recognize the restrictions set by the ground landlords and by convention. Portland stone fronts were compulsory. Custom has established that this material when used shall be a veneer to concrete-cased steel construction. Economy of space and ease of erection forbid that stone should take any of the greater loads. Permanent scene-painting has become the rule. Although most thoughtful architects would

willingly make their street fronts representative of the construction used within, both they and their employers were separately fearful of one another and, together mindful of a supposed public opinion, have not yet dared to attempt such a system of building.

Seen from the north, the Kingsway is like a straight ravine cut out of stone. The sides of the ravine seem here and there to indicate an ordered arrangement of light and shade ; at the end is seen a fine archway suggestive of an entrance to princely halls. It is a pity that all the architects employed in the street could not have met in consultation to discuss its main lines and masses as a whole. The London County Council attempted to compel a unity of design, but that desire was almost immediately overruled by individual and commercial opposition. Had a definite base-line somewhere at the level of the second floor been agreed on, had some considered skyline been accepted, the street would have been improved ; each architect no doubt would have welcomed control, especially if, as suggested above, he had himself helped to organize it. Not many of the buildings 'tell' individually when the street is viewed from either end. When seen in this way some even among

the better examples add to the confusion of the whole.

In Victoria Street (though there it is, I think, an accident) a fine effect of perspective provides food for thought. Standing opposite the western towers of the Abbey, the first block of offices on the south side of the street is seen to give a sense of scale and proportion to the receding fronts. The architectural features of this building are all as bad as any that can be found in the Kingsway, yet the accident that the absurd balconies, or window-sills of the first and third floors, support at each corner balls cut from Portland stone has lent dignity to the block. These balls have caught the rain, and after the manner of Portland stone gleam white in consequence. Their number seen in recession down the street make two definite horizontal lines that divide the façade into very pleasant proportions. I do not say that the same means of getting effect should be again adopted, nor do I say that these buildings show as great a knowledge and care in their design as any in the Kingsway, but I do say that something of value may be learned from this accidental result. At least this unexpected quality shows how important it is to perceive what makes the main features of a design,

to emphasize them not only by their own carefully thought-out form, but also by subordinating all other parts to the idea they embody.

Messrs Trehearne & Norman, who are responsible for so many buildings in the Kingsway, seem to have learned this from their own work and to have developed the idea when they turned from one completed block to another site. The buildings this firm has designed at the southern end of the street may well have looked fine as drawn out on sheets of paper. There the skilful technique of drawing must have made the subtle play of surface planes an interesting study. It is possible that the thickening of some pencil lines or the shading in of some windows may have given the impression of a ruling idea in the design. The finished work is, however, disappointing ; the intention can be recognized, but the achievement of that intention is spoiled by too much prominence of, or too great a variety in, the subordinate parts.

Africa House deserves the highest praise. Under the restrictions set by landlord and custom, better work could not have been done. The planes of the building are well developed ; it is thought out in three dimensions ; the outlines are excellent ; the massing of the shadows into three window

groups is satisfactory. The clever cutting back of the main corners of the building from about one-third their height to the top when seen diagonally prevents the feeling that the upper storeys lean forward over the pavement, a feeling which almost always is given by the higher façades of our streets. This unpleasant illusion is further corrected by the fact that the top storey is itself in fact set very considerably behind the face of the building below. I cannot end my appreciation of this work with these words, for I feel bound to notice the fine use made of the Doric columns at the ground floor stage. Here the difficult matter of arranging two floors in the height of a single order has been overcome without suggesting to the wayfarer any idea that a difficulty existed. Though the face of the window-glazing divides these columns vertically for a part of their height, it does not interfere with their appearance as circular columns. The narrow band of stone which marks the front edge of the first floor appears as a desirable stay between the heavily loaded pillars. While we wonder at the skill of the architects of this building, it is desirable to remind ourselves that what faces the street is applied ornament, make-believe construction, artificial as the stage castle, though for

cardboard, paste, and canvas are substituted the permanent materials—stone and metal-framed glass.

Yet the unreality of the front of Africa House is truth beside that of the great triumphal arch which ends the street. What is one to say of this? Would it have been possible to have filled the vista with a front which would at the same time have satisfied our sense of scale and have expressed honestly the mundane purposes of the building it screens. I can offer no suggestion how this could have been done. The architects, Messrs Helmle & Corbett, evidently thought it impossible. They lied boldly and successfully. That they liked lying I doubt, for the rest of the Bush Building honestly tells what it is.

Here, if anywhere, amongst our modern buildings, may the man in the street see what architects mean when they talk of designing in three dimensions, for, heaped up in receding cubes, this great mass of offices stands nobly, the dominating feature of the neighbourhood. The view of it from Westminster Bridge makes finer the already fine front of Somerset House. The new building appears to rise above the old, set precisely at the right distance from the horizontal stretch of Chambers's master-work, as though that architect had always wished

so to complete his group of buildings. I am told that this and other distant views of the Bush Building were considered and anticipated by Messrs Helmle & Corbett when they planned these offices. I hope it may be so, for it is pleasant to think that men with such thorough methods are to-day practising the great art of architecture.

Many things about this building I would like to describe, but it is hard to do so clearly without the presence of both it and an audience. I must rest content with reference to two parts, the semi-dome and the columns below it. First, then, I would express my special admiration of the two great columns that support the marble beam so finely used as the symbol of friendship between all those nations which speak the English tongue. In themselves these columns are beautiful ; their fluting, their neck moulds are satisfying, but most perfect, most free in design are the capitals they carry. The circular form of the bell of these capitals is not hidden, neither is it left naked. Two tiers of curled leaves clothe the springing from the topmost drum. Beneath the abacus, except for the firm, clearly-cut volutes, the round plan of the bell shows all the natural beauty of that form. Only in the centre of the concave abacus does its

crowning rim just master the face of that member. The abacus also takes the simplest form that custom expects in that position.

Second, I would specially notice the coffered semi-dome under the great arch which faces north up Kingsway. Seldom has any concave surface in a similar position been more skilfully decorated. The depth of the octagonal coffers appears exactly sufficient, and the enriched mouldings which carry the normal surface of the semi-dome back to the recessed planes of the coffers are wonderfully right. The mouldings are richly but not coarsely carved. The sunk planes of the coffers themselves are enriched with incised decoration.

There is much talk nowadays of designing in the American manner. It is said that the buildings in Kingsway are so conceived. Some conscious study of the high buildings of the cities of the United States there has no doubt been, but I think to call this work typical of America rather than of any other country is not true. When the conditions approximate, when the means at the disposal of the builders are alike, surely similarity is inevitable. Although a citizen from the great new nation made the plans for the Bush Building and supervised the execution of the work, I would claim the result

for our generation rather than for any nation. Just as now all materials in this country have become 'local' materials owing to our means of transport, so is the modern manner of architecture becoming 'local' by reason of the instantaneous interchange of ideas between nations.

## WATERLOO BRIDGE

MAY 1924

By the time this is before the reader the question of widening Waterloo Bridge will have been more fully discussed and the London County Council may have considered the matter fully in its relation to the whole question of traffic crossing the Thames from the Strand towards the south. It seems, however, that a brief summary of points as at present put forward (I am writing on the 10th April) may well be stated here.

The bridge is one of the perfect buildings of the world. The spring and sweep of its arches between the level road and the surface of the water is a natural response to the demands of granite building. Its beauty is the result of the right relationship of width to span ; it is derived from mass form rather than from decoration, and in addition the very fine columns, cornice, balustrade, and arched abutments express this ; they are a part of the whole rather than applied design.

It is a mistake to think of the bridge as two façades.

The question of more roadway across the Thames from the Strand must be considered together with other bridges, existing and to be built, and with the traffic conditions on the adjoining streets.

Economic questions must be considered with foresight and not with regard to the bridge alone.

Charing Cross Bridge cannot be very long postponed.

The public can claim the last word and must have all the facts put before it fully and without prejudice. For instance, is there a proposal to run trams over the bridge?

It is not surprising that, with the present evidence before them, thoughtful people have concluded that a mistake, a very serious mistake, will be made if Waterloo Bridge is rebuilt or repaired in any other form than the existing and without added width. There is authoritative opinion that the bridge may be strengthened without rebuilding.

The discussion about Waterloo Bridge has drawn opinions from many men. Amongst others some sentences written by Mr Bernard Shaw seem to show that he is hopeless of our ever getting fine bridges built. There may be few or many who share his opinion, and I would reassure them if I can. He wrote: 'They can employ an artist

wholly ignorant and reckless of engineering . . . or an engineer . . . who knows he is not an artist . . . ; but I implore them not to attempt to combine the twain in one person.' The idea these words convey is that engineering and architectural needs are opposed and that hope of union is to be abandoned. This is a false idea due to the wholly artificial separation of these two professions. It is responsible for the spoiling of much work that would otherwise be good, and yet Mr Shaw appears to accept the situation without question. He was probably thinking that the new Lambeth Bridge is to be a bridge designed by an engineer in steel and concrete to which an architect is to apply the seemings of a stone construction. A complete whole cannot be achieved by such means. Could Waterloo Bridge have come into being under such conditions? Would anyone say that Rennie was not a true architect as well as an engineer?

It has always been man's nature to build. The danger of specialized training seems to be that those so taught forget they are first of all free men with free minds. It would seem they forget the use of any but one faculty, and that faculty becomes so strained as to hurt or atrophy the remainder. It is to be hoped that when Charing Cross Road

bridge takes the place of the existing one it will not be a work designed by a specializing engineer and tricked out by an architect trained to think in looks and not in reality. Thus far I go with Mr Shaw, but not further. I pray it will be a work of a man (or men) with knowledge of how to build ; using all his powers of mind and instinct ; a man conscious of his own reality and of the reality of the conditions in which he works. In such a case, like Rennie, he will build the bridge well, whether he be called architect or engineer.

## WATERLOO BRIDGE

MAY 1925

It will be remembered that the Chairman of the Thames Bridges Committee advised the London County Council that Waterloo Bridge should be removed and a new one made of a different design. Soon after this advice was given a deputation waited on him, and he then said that no stone of Waterloo Bridge would be touched until July. He gave the deputation to understand that if it could bring conclusive evidence to show that the existing bridge could be economically and permanently repaired, the demand for increased traffic facilities at that crossing of the river would take a second place.

The societies which are allied to resist any interference with the bridge are seven, namely, The Royal Academy, The Royal Institute of British Architects, The Society for the Protection of Ancient Buildings, The London Society, The Town Planning Institution, The Architecture Club, and a group of civil engineers formed *ad hoc*. By the

courtesy of the London County Council these societies have been supplied with all the information at the disposal of that authority. This information has been studied by some seven distinguished engineers, and when their opinion has been considered by the societies they will present it to the London County Council, together with a strengthened statement as to the architectural and historic value of the bridge. The societies hope that this evidence will be so formidable that an independent tribunal will thereafter be appointed to hear evidence, by means of a public enquiry, as to the possibility and desirability of preserving the existing bridge. A public enquiry is essential. Until this has been held the citizens of London must feel with apparent, and perhaps real, justification that the case for preserving the bridge has never been fairly laid before the London County Council or the people of London as a whole. The allied societies are confident that if a fair hearing is accorded to them they will be able to show that no difficulty greater than those that are met by English engineers almost every day will have to be encountered in the work of repair. And as a consequence the doubts on this matter will for ever be silenced. This time last year when the Society for the

Protection of Ancient Buildings first instructed Mr Dalrymple-Hay to advise it as to the repair of the bridge, the public were so much impressed by the statements made by the London County Council that there was then the greatest difficulty to get the support of authoritative public men. The general opinion has so far changed now that it is difficult to find any who believe that the bridge is worn out. And although there are still a number who have yet to be convinced that a great saving of public money will accompany the strengthening of the bridge, there is no doubt that that number is rapidly decreasing. It is not too much to say that if the underpinning proposals had been adopted a year and a half ago, there would have been no need for the ratepayers to bear the cost of the temporary bridge, much less the rebuilding which the London County Council still officially contemplates.

It is unnecessary again to describe the beauty and value of the bridge. It is, however, desirable to write a word or two in answer to those who, while they appreciate the fine qualities of the bridge, have somehow come by the idea that the societies which are opposing its demolition are die-hard obstructionists. That suggestion must

be dismissed at once. It is not the work of an obstructionist to attempt to preserve a building which adds so much grace, dignity, and mystery to a view of London that is so fine. It is not the work of an obstructionist to stand for the protection of a comparatively narrow bridge at a crossing of the river where no one now would propose to build newly, had the present bridge never been built. It is not the work of an obstructionist to urge that the right place for a new bridge is at that crossing of the river where converging traffic most requires it, namely, at some place not far from the present Charing Cross railway station. On the other hand, it is the work of an obstructionist to lead to the present rather awkward crossing of the river an increasing quantity of traffic, and still to draw thither daily all that which already over crowds the roadway. It is also his work to hinder the fulfilment of a piece of town-planning which will ease the life of the citizens of London and at the same time preserve for their proud enjoyment a building which may justly be numbered among the wonders of the world.

## ADVICE TO THOSE WHO ARE GOING TO BUILD A HOUSE

THE following article is designed to indicate the general principles which should be in mind when a new building is being considered. There are many books about new houses, and much has recently been written about the modern devices which are designed to save labour, but about the procedure to be adopted to secure what is desired little has been published.

The first thing to be done, even before choosing a site, is to decide on an architect. There are four reasons which generally influence this decision. An architect is often appointed because he is a kinsman or a friend. This is no bad reason. It has been observed that public appointments gained through family influence are as well filled as those gained in any other way ; and I see no reason why the same should not be the case in a private matter. It is an act of kindness to help one's friends, especially when they are at the beginning of a career ; in fact this is a reasonable and right way

of making the choice. Should there be any doubt, however, about the ability of the friend or kinsman, he may be asked to submit his proposals to some architect of established reputation chosen by himself as a consultant.

A second reason for choosing an architect is that he has an established reputation and is well known. Such architects at least have experience. They could hardly have reached a high place in their profession without a sound knowledge of the business of building. In their hands it is unlikely that there will be any money difficulties with the contractor. They have experience as regards the cost of building. The execution of the work is usually to be relied on under the supervision of men who have made for themselves a large practice. Personal attention by the principals of such firms, however, cannot be so close as that of the less busy architects.

A third reason indicating the selection of an architect is that he lives near the site. An architect so situated can supervise the work without loss of time in going to and fro—a matter which is worth much if other things are equal. Again, there is less chance of mistakes occurring through ignorance of local conditions as to materials, peculiarities

of subsoil, and as to the character of the local building firms. It should be stated, however, either as an advantage or as a drawback, that provincial architects tend to be 'provincial' and those of the suburbs 'suburban.' These distinctions are less marked than was the case some years ago.

The fourth method of choosing an architect is, to my mind, the best, as it is also most just; that is the employment of a man who has done work which the prospective house-builder admires. In no other way is he so likely to get satisfaction, and yet few architects are employed for this reason. It may be that the house which is admired has been seen in one of the many books about new houses. In such a case it is desirable that it should be visited before instructions are given to the architect to prepare plans. And with regard to such a visit of inspection some advice may be useful. It is well to ask what things are found to be inconvenient in working, and if opportunity occurs this question should be put to the servants as well as the owner. But in either case the answers should be considered with caution. The visitor should judge for himself whether there is ground for complaint or not. I have known a case where the lady of the house

never desired to leave her earlier home and therefore could say little good of her new abode.

Let us imagine then that an architect is marked out for one of these reasons, but before he is engaged the prospective owner of the new house would do well to take one other precaution. He should ask the architect where he may see houses of the size he means to build which have been built from his plans. It is an advantage to both architect and client if a visit to these houses can be made together, for then not only do they get to know something of each other, but the architect is also given an opportunity of explaining what difficulties confronted him in the work ; he is able to show what he considers are the strong points of the plan and where he feels it to be weak. He can tell why certain materials were used and what determined the general form of the house. On his side the employer can make up his mind whether he will be well served by this architect. When the building owner has decided on his architect he should ask for the scale of fees which are issued by the Royal Institute of British Architects, so that there may be no misunderstanding on this point.

We will now suppose that matter settled. Then and not until then, unless indeed circumstances

forbid a choice, the site should be chosen. Before this important question is settled a visit should be made to all the possible sites, and the future owner should tell his architect the reasons why they attract him and the features which appear to him to be disadvantages, and he should ask what the architect has for or against each position.

Having then got thus far, the site and the architect both settled, it is time to go into the details of the plan and general arrangement of the house. Until this stage is reached the course has been plain sailing. It is now that the real difficulties begin; on the one side there is the accommodation which is desired, and on the other is the money available to procure it. It is very seldom that the two balance. It is desirable that the client, for so the owner may now be called, should give his instructions in considerable detail. He should specify the sizes of the rooms he requires, and in this respect he should have already noted the dimensions of any rooms which he has thought suitable to his needs. Further, his opinions on the relative positions of doors, windows, and fireplaces will be useful in the preparation of preliminary plans. It is not unlikely that a house containing the number of rooms he desires will be found to cost more than he wishes

to spend, and in that case the plans submitted to him will show rooms of less size, and it may be fewer in number. It will then be desirable for the architect and his client to see rooms of the sizes shown on the plan. This is important if disappointment is to be avoided, for without comparison with actual rooms it is difficult to visualize their appearance from a plan. It is a mistake to hurry over the preparation of plans. Time given to consideration of them at this stage is well spent. Not only should rooms of like size be inspected, but it is also desirable to see fittings recommended by the architect in actual use ; fireplaces, door-handles, dresser drawers, hanging cupboards ; these and all the other details of a house need to be settled before the plans are sent to the builders for their estimates, for alterations afterwards mean extras. Extras, the bane of both employer and architect, can be further avoided if it is clearly understood that the builder is to take no order except through the agency of the architect. Again, with regard to extras, the owner should make allowance in his estimate for such out-buildings and garden works as will be required, and these may wisely be included in the contract and be carried out under the architect's supervision.

Not uncommonly it is suggested that it is to an architect's advantage to run up the cost of building. The fact that he is paid on a percentage of the cost of the work lends colour to this suggestion. Nothing, however, is further from the fact. An architect's reputation rests on his satisfying his client, and anything that tends to do otherwise harms him.

It is probable that the course I have advised with regard to house-building will appear so obvious when it is read that it will be said it had better not have been written, yet it is due to omitting to do the things here advised that most of the discontent connected with new houses occurs. Houses are important things, and it is worth while taking trouble with them. Most architects will provide good workable homes, but unless those for whom they design take pains to understand what is being prepared for them it is not unlikely they will be disappointed, and although they may not admit it, the cause of disappointment will in that case be theirs.

## DR JOHNSON ON A THAMES BRIDGE

THE great number of newspaper letters about the bridges over the Thames is no new thing. In 1759-1760 no other than Dr Johnson took part in a correspondence then appearing in the *Gazetteer* with reference to the designs sent in for the new bridge at Blackfriars. I am told that a number of architects whose names are held in respect submitted drawings in competition for the new bridge, and among their number were Chambers and the younger Dance. Dr Johnson's interest lay in the question whether elliptical or semicircular arches should be used, and he favoured the designs of Mr John Gwynn, an architect whose reputation is now maintained by the beauty of Atcham Bridge in the county of Shropshire, at present threatened by the road authorities, and the memory of the English bridge at Shrewsbury, the latter demolished only during the last few months.

Dr Johnson's defence of the semicircular arch is worth quoting :

The Question is, therefore, whether an elliptical or semicircular arch is to be preferred.

The first excellence of a bridge built for commerce over a large river is strength ; for a bridge which cannot stand, however beautiful, will boast its beauty but a little while ; the stronger arch is therefore to be preferred, and much more to be prefered, if with greater strength it has greater beauty.

Those who are acquainted with the mathematical principles of architecture are not many ; and yet fewer are they who will, upon any single occasion, endure any laborious stretch of thought, or harass their minds with unaccustomed investigations. We shall therefore attempt to show the *weakness of the elliptical arch*, by arguments which appeal simply to common reason, and which will yet stand the test of geometrical examination.

All arches have a certain degree of weakness. No hollow building can be equally strong with a solid mass, of which every upper part presses perpendicularly upon the lower. Any weight laid upon the top of an arch has a tendency to force that top into the vacuity below ; and the arch thus loaded on the top stands only because the stones that form it, being wider in the upper than in the lower parts, that part that fills a wider space cannot fall through a space less wide ; but the force which laid upon a flat would press directly downwards is dispersed each way in a lateral direction, as the parts of a beam are pushed out to the right and left by a wedge driven between them. In proportion as the stones are wider at the top than at the bottom, they can less easily be forced downwards, and as their lateral surfaces

tend more from the centre to each side, to so much more is the pressure directed laterally towards the piers, and so much less perpendicularly towards the vacuity.

Upon this plain principle the semicircular arch may be demonstrated to excel in strength the elliptical arch, which, approaching nearer to a straight line, must be constructed with stones whose diminution downwards is very little, and of which the pressure is almost perpendicular.

The above extract is part of the first of three letters written by Dr Johnson in defence of Mr John Gwynn's plan. But even his weighty arguments were insufficient to win the competition for his friend.

## ARCHAEOLOGY AND ARCHITECTURE

PUBLIC interest in architecture has led to the discussion of many matters relating to the subject. Such a question as, 'Is archaeology detrimental to living architecture?' has constantly been disputed by practising architects and their pupils, but has only recently been considered by the lay world.

Archaeologists are those who devote their time to the study of all antiquities. Some among their number have concentrated on the study of building remains alone. Such men can tell the appearance and age of a building from but a small portion of its remaining foundation, and, again, from a very few carved stones. They will tell the general form and size of richly decorated parts. For instance, such men can reconstruct the pulpitum of a mediaeval abbey, or the ambo of a Byzantine church from a few remaining stones. This science was developed through the last century until it became 'exact.' There is nothing in it that is detrimental to architecture. In fact, without the archaeologist we should lack much knowledge of

the history of the world. He surveys the country which the historian describes. By much digging he lays bare the bones which the historian first links together in a complete skeleton, and thereafter adorns with living flesh created by his imagination, almost as does the naturalist when he draws those pictures of prehistoric beasts from the knowledge he has gained from fossils collected from different parts of the world.

I am, however, of opinion that the results of archaeological study, as applied to modern building art, are harmful, and I will try to trace how this has come about.

The Renaissance, with its impulse for knowledge of all the arts and sciences, turned men's minds to the study of the learning of the ancients, and when its light was directed on to the art of architecture by a not unnatural confusion of ideas, this impulse was diverted from the examination of ancient building methods and forms to an acceptance of their styles as the only civilized means of architectural expression. When this arbitrary theory, that the revived style of the ancients was alone fitting to civilized man, had been practised for some time, it was found inconvenient and unsuitable. For, as the energy born of the Renaissance

died, a new architectural tradition, begotten by the classic form and born of the realities of life, was growing into healthy being. The new tradition to which I refer was that which in England grew from the architecture of the Adam Brothers. Tell a child to draw a house, and it will quite sufficiently well illustrate the kind I mean, namely, the kind in which sash windows are spaced at ordered intervals. Such houses had windows with thin bars in sash frames set back from the external wall face in reveals, like those the Adam Brothers delighted to use. These houses seldom had pilasters or columns, and, where they occur, they were not reproductions of the classic form, and yet they were not ill-shaped. For the most part, they had flat-pitched slate roofs, with wide, projecting eaves, plastered on the underside. In the country many pleasant vicarages and farm-houses are of this type. In London, between the area covered by the Georgian buildings and that where red brick villadom and pretentious street fronts begin, many good examples of this manner of building may be seen.

But the habit of looking to the past for architectural style again prevailed when the romantic mind of the educated people of the first fifty years

of the nineteenth century turned for inspiration from the continuity of this school to the study of the mediaeval civilization of western peoples, the civilization that expressed itself in Gothic architecture.

In a word, the building methods which looked like becoming the natural expression of the nineteenth century were set aside as too common or vulgar for monumental architecture and was only fit for the purposes of the speculative builder. Architect vied with architect in the effort to show the amateur lover of archaeology that he at least was able to reproduce the forms which had been developed under conditions quite other than his own. The engineer and the jerry builder, with a knowledge obtained at second hand from these really learned men, but with a greater sense of reality and with a closer acquaintance of the means available in their time, applied to their buildings, sometimes in the most unexpected manner, the decorative forms which they saw their more academic brethren use with such respect. I refer to the men who, when they made new iron bridges, decorated the parapet with cast-iron quatrefoils, and who, when they used iron columns, gave them caps and bases like those they saw in the new city

offices. Or again, when the manse or vicarage was in building gave the front door way a pointed arch and added cusps to the top of the glazed panels that lighted the inner hall. It is not surprising, with these strange affectations about them, that people declared with one voice that architecture was dead, and, ignoring the vigorous changes that affected all other forms of human expression, asserted yet again that this dead art could only, nay indeed should only, look to past work for hope of new life. A few thoughtful men, however, believed that the natural growth of architecture was paralyzed by the general misapplication of the results of the important study of archaeology. During this phase of insanity (not yet quite dead) architecture became a mystery which it was thought could only be understood by a few learned men ; it was no longer what it should be, a source of pleasure readily understood by all because of its real relationship with everyday life.

All knowledge is useful to the architect, and I hold that the study of archaeology is not less useful than others. We have seen how misuse of archaeology hindered the real development of architecture during the last century. We suspect that it was not wholly useful during those two preceding

centuries when Englishmen looked to Italy and Greece for inspiration. It is not because of the excellent work done by the antiquary that architecture lost touch with reality, but rather is it because from him the architect learned to think in the styles and periods which the archaeologist had studied and so well classified in the name of history.

We may say, then, that architecture was divorced from reality by the misapplication of archaeological knowledge. But this misuse does not mean that the architect should not study the ancient examples of their art. It means that he should study them from a distinctly different point of view than does the archaeologist. There is even no reason why an architect should not also be a true archaeologist; so long as he recognizes that he must not apply his knowledge of the ancient forms gained in this study for clothing the buildings of the present day.

An architect should study ancient buildings to gain a thorough understanding of the construction employed in the conditions prevailing when those works were done. He should find out why this or that material was used, why the moulded form so carefully measured was employed, how it developed, and whether it was well suited for the purpose for

which it was made. In this way he will notice that each innovation was a more convenient or more economical way of gaining the end in view. The object of the study of an ancient building by an architect is to attune his mind to the thought of those who built so well, so that he too may give to his work in his own time the same quality of thought as did the builders of the house, cottage, warehouse, or church he so much admired. The object of his study is not to enable him to reproduce what had pleased him, but to stir his mind into activity so that he may make as good use of the means at his disposal as did his predecessor. I remember hearing Mr Bernard Shaw say that the first thing to do if we wish to have good new cottages is to pull down all the old ones. I do not pretend to explain what he meant. His words suggested that he was hopeless that a sensible way of building would ever be developed until we forgot the bad habits we had learned through misunderstanding the objects of the archaeologist, or in other words, until we forgot to copy the expression of the past and again began to live in the real present. This interpretation may truly be applied to all new buildings.

I should like to end my remarks by saying that

it is a help to the appreciation of the buildings of the past to understand the building methods of the present ; in fact to fully appreciate the one, proper understanding of the other is necessary. That it is most desirable that we should for our own pleasure as well as for our practical good understand and appreciate ancient buildings I have no doubt at all. Archaeology proper has never harmed architecture. It is the use to which architects and the amateur have put it that we must blame the present chaos of thought. And it is not the architect's fault alone, for as long as he is ordered to design rooms in the manner of this or that period, and these rooms in a house that must appear to belong to yet another age, so long will it be impossible to hope for any true and good building.

## TRADITION AND MODERNITY

THERE has been more than usual discussion lately about the merits of *traditional* and *modern* architecture. This may be regarded as a bad sign. The protagonists of both parties argue nearly as fiercely as did the heroes of the last century when 'The Battle of Styles' was vigorously and uselessly waged.

It interests me to discover the conditions in which works of architecture compelling universal admiration are produced, and to suggest that thus a proper guide will be found for those who build and for those who wish to appreciate the merits of buildings.

It is assumed by the 'Traditionalists' that tradition and conformity to tradition are good: and it is probable that building traditions are indeed a good influence on this art. But the 'Traditionalists' make one mistake that is so serious in the adherence to their theory, that it immediately shows the application of their conclusion to be false. They use the word *tradition* in a sense that

it does not bear. The kind of architecture they admire and desire is not *traditional*, but one which represents an academic *revival*. What they admire in buildings is the conscious reproduction of ancient forms reshuffled into new arrangements. Through such means it is possible—though it is difficult—to produce fine buildings. And I am inclined to think that the qualities that give these buildings a claim to be considered fine architecture do not rest in these means.

And those who hold that no new architecture deserves consideration unless it also deserves the title 'modern' are equally at fault. The architects of both parties apply to a precisely similar structural unit forms which their theories instruct them are the sign of grace. The 'Traditionalists' may by accident be the servants of tradition, but their work is not otherwise dependent on the quality. The 'Modernist' may by chance give us a building that reflects contemporary use, custom, and thought, but he too does so almost by accident. He uses a style based on one factor newly recognized, but this is so overstressed as to leave no room for others equally worthy. Where tradition is a force it is an inevitable force, and one that is weakened in proportion as it is theoretically con-

sidered or discussed. The same may be said of the 'modern' movement. It can wholly reflect modern *use* only when the modern *style* is forgotten or disregarded. These may appear sweeping and even questionable statements. Thought will show they are neither.

It is confidently claimed by some that a form of altar used before the Reformation is 'the *traditional* English altar.' That altar was traditional in those days. But because it was never seen, or used, or remembered, in England from Elizabeth's reign until the nineteenth century, its present re-use is a *revival*. This example of the misuse of the word tradition shows how the Traditionalists abuse that word. Tradition now lives in builders' yards, in machine shops, and under the eyes of the foremen who control the assembling of the parts of new buildings. It is also found in the procedure adopted in the offices of architects. It is the unquestioned means to an end, learned by example and by custom from a preceding generation. There are now traditional ways of riveting steel beams to steel stanchions, and of raising and setting these stanchions in position; and further, there is some tradition in planning their arrangement on the site. There was tradition in the

fifteenth century when the arch-stones of a river bridge were put in position, and when a mason set out the form and cut the stones of an arched and traceried window. Let those who dispute this turn to their book-shelves and seek in the dictionary for the meaning of the word. And to be modern does not call for more theory or energy than is needed to live, employing the current methods of the day. It is unnecessary to seek forms and methods not seen or used before. Were it otherwise only strange things would be modern. The designer of a motor-car could only claim modernity if he gave it an unexpected shape ; and the constructor of a great shop could do likewise, only if he added to efficiency unusual forms. These instances indicate wherein the so-called 'modernist' theory fails. The actual truth of the matter is that Tradition and Modernity in architecture are natural allies. They are the evidence of a current experience which has its origin in past use. Together they grow from the tree of human life. It is of them that great architecture comes.

If any reader of this article yet doubts this matter let him turn to the analogy of literature. Was not Hardy in his day a Modernist ? Yet, did he not write in accord with tradition ? Could the

language that Hardy used have been used in any other day than his? If not, it was modern language. Was the phrasing of his sentences consciously derived from the writings of an earlier age? Did it consciously reflect the style of Chaucer or Donne or Dickens or of any other author? If not, there is nothing of revival in his work. Yet without his predecessors in the use of the English language his works would not have been as they are. Is this not proof that he was in the great tradition of English writers? And I would ask further—are there any who claim that as he wrote he was conscious of Modernity or aware of the Tradition that bound him? Yet because of the beauty of his work it is recognized by all as 'classic.' Think of his great contemporary, Meredith. Is it not true that his work is a little marred by a very conscious mannerism which is akin to conscious modernism? In so far as this obedience to theory breaks the even movement of his sentences, his writing, like the work of the 'modernist' architects, is not in accord with the full and natural habit of his age, nor with the tradition that carried it to life.

As regards architecture, I desire to illustrate and perhaps to prove this conclusion by an examination

of the acknowledged excellence of ancient works, and in considering them I would ask the reader to judge them not by the standards of to-day, or they will be found to fail, but by the standards of the day in which they were made. To judge the work of a surgeon of the time of William IV by the standards of the theatre of St Thomas's Hospital, is to condemn it; and likewise to judge a mediaeval cottage, barn, or cathedral by the practice of our age is to condemn all these buildings and to find no good in them. Yet we know that the surgeons in times past were brilliant in their day; and no one thinks to deny the perfection of the Abbotsbury barn or the nave of Needham church. How is this? The answer is simple. When we consider these buildings, without being aware of it, we stand beside the original builders as they stood aside to consider their completed work. No qualities in their work suggest that they sought to build as others built before them, nor that they consciously sought to express the cultural, the prevailing, or the modern thought of their day. Like Shakespeare, and like Johnson, or like any Fleet Street pamphleteer, they used the ordinary language of their time. The greater differed from the less not because of their obedience

to consciously built theories, but because they knew the qualities of their materials and used them with a perfect sense of order and rhythm and purpose. The lesser man put granite where soft stone was suitable, overloaded the foundations, and emphasized not the whole but a part only of the purpose at which he aimed.

There is one quality in literature and also in architecture that does influence the result in different degrees and without hurt to either. This quality is independent of tradition and of the ordinary contemporary uses of an age. I refer to the cultural experience of the time. When Sir Christopher Wren directed the building of St Paul's and of the City churches ; when Vanburgh and Hawkes-moor sat bewigged in attendance on the Fabric Committee of Greenwich Hospital, there was prevailing a conscious interest in the arts of Rome. This interest saturated the minds of educated men. It inevitably found expression in the forms they used in building. Cultural experience has of necessity its effect. But it was and is less evident in lesser buildings than in greater. These stand almost without other mark upon them than the mark of individual builders borne upon a tide of tradition and contemporary use.

It is hard to-day from among the steep waves that hide the depth and speed of the current of life to discover what the main tendency of our cultural experience is. It may be an overmastering interest in our contemporary methods and inventions. If this is so, it will be natural that this interest should be expressed in our buildings. But if so, at its best it will appear as the result of digested experience and not of rationalization in theory.

Thus I conclude that tradition, that contemporary and cultural experience are the forces upon which good architecture relied and now—to-day—relies for its great achievement. It rested on these qualities in old days, and there is no reason to suspect that in this the matter is changed now. The excellence of great architecture never lay in stylistic design—whether the style be modern or ancient; neither do I see how it can ever grow from such a narrow and confined origin.

## THE REVIVAL OF CHRISTIAN ARCHITECTURE

TO-DAY, driven as was Pugin by a mastering zeal to persuade the world of some theory of architecture or of art, although they urge an art of a very different kind, men use almost exactly the same phrases as he used. Each generation which over-stresses the conscious wooing of the Arts is punished by the loss of what it seeks, or finds that the particular mistress it so ardently sought has no real existence. Good common flesh, blood, and mind are beside us here and now, yet we hardly recognize that mistress' real, useful, and excellent companionship, hardly consider her presence, thinking to find a matchless beauty in every other neighbourhood than our own. It is seldom that the normal is sought with excited zeal, yet it is the normal that is good, and it is the normal that fortunately can most easily be gained. And the normal is not the average, neither in art, in letters, nor in commerce. The average can never rise to great perfection, but the normal can be perfectly

expressed in any activity of man, be it architecture or poetry—painting or agriculture. Wherever art shines through man's work, be it in the trim finish of a railway embankment, in the nice edging of a newly ploughed field, or in the complete expression of an idea in sculpture, it will be seen that the normal has been fully and naturally developed and that 'Theories of Art' have had little influence. Consider the works that we call the Classics : they are all founded in normality and all spring therefrom ; and this is so in regard to all the noble works of man. The beauty of an English landscape is founded in normal agricultural methods and has about it all the beauty of English classic literature. The perfect loveliness of an old farm home-stead, of the grouped manor and church are of like kind. The figure sculpture of the Gothic and of the Byzantine traditions are of this sort also, and the worth which they have is still unsurpassed. All these, each in its own time, were the expression of normal thought ; they were never the result of art-theories ; they neither represent a conscious search after revival nor a determined effort to be *of their day*, and in such acknowledged perfection we can never detect the proud desire to do something new. Modernity and newness are as inseparable

from normality as are the ways of an animal in any chosen period of its long and slow changing evolution. The Normal is not static, it is of the Universe, and with the Universe it for ever changes. It is so much with us that it needs no search to find it, no theory to teach its presence.

Wherein then did Pugin's demon-driven and word-supported theories demanding the revival of Christian architecture fail? True are the arguments he used to uphold it, and true are the things he says of that manner of building, when it was the everyday vernacular. The Theories proved false and the revival failed exactly because they were contrary to normal development. There is not now, and there never was, any need to do other in any art or in any trade than *well* in an ordinary everyday way. The man most fully developed in all his faculties working thus in tangible materials will be seen to give his fellows things of such surprising perfection and beauty as, using words, did Homer and Shakespeare. Pugin is to be admired because of his radium-like vitality and zest. It was so great that it burst through his theory-bound mind more than he himself was ever aware. Only for this reason can he claim to be recognized as an outstanding power still

influencing us to-day, whose words and arguments we use and quote—often without knowledge of their source—one hundred years after he was impelled this way and that among men teaching his art gospel, his religious hope.

Seeking the causes of the meagre architecture of his day, Pugin wrote: ‘Every architect has a theory of his own, a beau-ideal he has himself created, a disguise with which to invest the building he erects.’ What else had he than a beau-theory; what else has the man who to-day goes ‘modern’; what else have they who teach that unless the local materials are used the resulting architecture will fail; and what else is confusing the mind of the bungalow owner when he glazes his front door with coloured glass set in lead calms? Is he not theory-ruled, too, who nails blackened boards to the good brickwork of a normal Georgian house, and were not the men in like case who aimed to destroy London’s noblest bridge? Our instincts to well-doing are distorted and turned aside by our own waywardness, and by a trust in the conclusions reached by words logically assembled.

With deep truth he wrote: ‘Styles are now adopted instead of generated’; yet he set out to

persuade the English people to apply to their normal building methods the style generated of a social system long supplanted, a style based on life and free of word-born theory. To-day, as in his time, styles are still adopted: to the selfsame core and to the ordinary framework of two adjoining premises the *Modern* stylist and the stylist who lives among the photographs of past architecture consciously apply mannerisms logically developed from some self-chosen axioms.

‘The history of Architecture is the history of the world’; it tells of man’s follies as well as of his wisdom. No man can escape his part in making the world’s history; there is no merit in this. Those who claim merit because by making changes to a building they are adding historic evidence to its story befool themselves; for the making of history is inevitable, and is as truly performed by complete inactivity as it is by a display of restless imitation.

Pugin’s sentence was, and is, profoundly true, but his desire to lead the course of architectural history into his favoured by-lanes resulted not in its even and normal progress but in distortion and affectation. In England, and to some extent in

Europe, he bent its course as a ray of light is bent as it passes the heat of an active sun. And yet, while he was set upon revival, he wrote that: 'Our . . . architecture *should have* . . . expression illustrative of our manners and habits.' In his mind he decided what those manners and habits should have been, and therefore urged an architecture which would illustrate his conception. None doubts the truth of his phrase unless perhaps one would change the *should have* (which I have set in italics); for there is danger in *shoulds* and *oughts*, whereas there is no danger in doing well what is normal without pride, without conceit, and without that kind of modesty which is akin to shame.

Have we not lately heard a great scholar in architecture and in the philosophy of architecture use words exactly similar to those which Pugin printed in italics because they were at the core of his faith: '*Every building that is treated naturally, without disguise or concealment, cannot fail to look well.*' Yet Pugin attempted to force on industrial England the natural expression of the Middle Ages. And to-day some disciples of Lethaby preach that efficiency is art, forgetting that it is part of man's nature, part of his vital quality, to give to an

expression of efficiency such grace as a proper economy both demands and permits. 'Looks' are a part of the 'Being' of a building; they are not applied and if consciously sought will not be found. Pugin could have said as wisely, every good building has good looks, therefore let us build well, for well-building includes a strength, an efficiency, an elaboration or a simplicity, that are proportional in their relationship to human need and to man's right pride.

The architect who encourages his mind to accept the theories of the *Modern* school and who thus becomes equally with Pugin a mannered stylist, perceiving the folly of that great man's Manner of building, will be astonished to find that he has a common foundation for his dogma with the most influential of the Gothic revivalists, for Pugin wrote :

In matters . . . mechanical, the . . . architect should gladly avail himself of those improvements and increased facilities that are suggested from time to time. . . . Had the old builders possessed our means of obtaining and working iron, they would have availed themselves of it.

Again, those art critics, both professional and amateur, who cry out against a changing manner

will be surprised, and may be inconvenienced, to know that so great a conservative as Pugin should have written when yet Queen Victoria had scarcely begun to reign: ‘The great error of modern sculptors is their servile imitations of classic art.’

In considering so great a protagonist of an architecture based on word-born theory one cannot help but be startled by the likeness of his doctrines to those of our day. The same sentences are used by lecturers in every school of architecture, and it is very likely, personally I am inclined to the opinion that it is certain, that the architecture which men so taught will make, will, like that of Pugin, be no more related to reality than was his. Read his conclusion, omitting the word “ancient,” and consider if it does not precisely represent the vaunted conceits of contemporary teachers:

In conclusion, it must appear evident that the present revival of ancient architecture in this country is based on the soundest and most consistent principles.

Does it not appear from these quotations that theorising about art is a way of killing art? It may even be rash to attempt the exposure of this method by offering another theory as I have done

here, namely, that the study of the ancient works of man reveals that those which are acclaimed good are never other than the most perfect expression of what was normal when those works grew or took form.

## REAL ENGLAND AND HOUSING

PERHAPS the most comfortable way in which man might have lived would have been under the manorial system of the Middle Ages, had it been developed in peace and justice. That it did not reach the perfection possible to it was partly due to those 'civil marauders' who, in every age, take advantage of the law to their own ends without thought for the spirit which created it. While they so act the majority continue to live according to the system, but before this reaches finality the new spirit, introduced by the few who saw how to turn it to their own advantage, establishes itself and another era is in being. Thus the industrial age came, and in its turn showed signs of becoming one in which men could live, secure of food, clothing, and houses. Again, a new system proved men's hopes false; for certain individuals found the manipulation of the means of production more quickly lucrative, and the comfortable development of this other way of life was in its turn gradually made impossible. May it not be wise to seek to

understand the tendency that exists, to recognize its direction, and having done so, to develop it within its limits.

To-day some look back on the Victorian age as one which for want of a little intelligent management might have become excellent. They regret the passing of benevolent squires, manufacturers, and merchants, and the urbane lives they lived as respected servants of a system. Most of all these folk regret the changing face of England which is accompanying the entrance into a new age.

Always, before it was apparent that a system could be brought to something very like an economic and social perfection, the condition on which such excellence could be built had become a thing of the past, broken by those who, innocent of any definite desire to make changes, betrayed the system either to their personal gain, or to assuage some hardly-comprehended discontent.

To-day some seek to hasten the process of change, others to stay it; both sorts are moved by desires for the public good. Others, the clever few, take opportunities for their own profit, and inevitably, but without definite intention, give the flood of affairs impetus towards new and unexpected channels.

In the matter of housing the pressure of these influences is being felt.

There are those who believe that each petty 'esquire' should hold his house as independently of society as the country squires held their estates. The Englishman's house is his castle, and he is apt to make this known by making it markedly different from his neighbours. Instead of a social order good for all, there are many conflicting orders. The individualism of the Victorians has passed from the few to many, but it has lost much of its constructive virtue and stresses chiefly a desire for personal difference. It promotes an uncomfortable confusion of ideas. Among buildings this leads to a great variety of jarring shapes.

Others busy themselves to continue, in very changed conditions, the character which our villages acquired under the old squirearchy. They wish that the new houses that are now necessary should reflect the economy of an estate yard rather than that convenient to contractors whose methods have grown from a new economic soil as naturally as mushrooms in a field.

And while these philosophers of *theory* each in their way play Canute against the rising tide of change, public authority feels its way rather

blindly towards a new controlled order, in which they occupy something of the co-ordinating place of the early manor and the later benevolent landowner.

It is to these authorities alone that we can now turn to give England a new and seemly character; for a new England is inevitably growing. It is an England we shall be wise to welcome; for the aspect of our land is going to change. In this changed state the majority of people will have the same interests as those which, in the nineteenth century, were shared exclusively with something of a snobbish pride by the literate and educated classes. But the people who are beginning to enjoy these privileges will not live in generous houses surrounded by ample gardens amid secluded orchards; they will live on small plots such as were occupied by the labouring classes in the Victorian era. In this new England we shall be more of one order, and pride in difference will gradually disappear. A man who looks around can see these changes taking place, and if he is wise he can welcome them and wish for and not against their coming.

To-day, then, in the matter of housing, there are still, roughly, three distinct aims, and they are

represented by (a) the architectural revivalists who extol local materials and 'traditional' methods, (b) the 'marauders' who buy up estates and cover them with mass produced houses, where meanness is only limited by public by-laws, and by the minimum demands of those who need houses, and (c) there are the houses built by public authority. Of these three kinds the last is best, but they can be made better.

At the present time the Acts of Parliament which control house-building have two marked faults—one relating to the use of the old and the other to the building of new.

Little encouragement is given to local authorities to make use of the sound walls, roofs, and floors of old houses, which by misuse have become unfit for habitation. Their destruction is encouraged by the fact that it is not easy for these authorities to get a subsidy or loan for a new house unless it first destroys an old one. Local authorities do not at present possess power to order the number of persons which shall not be exceeded in a house, and it works out that the easiest way to get rid of overcrowding is to condemn a house and build a new one. In letting the new house, too, they can make agreement with the tenant, as any private

landlord may do, that only so many people may live there.

These two factors are now tending to strip England of the old houses which are an enjoyment to her people. I know of a house in a small town built early in Elizabeth's reign, and probably occupied for a time by the poet Spenser. In the first years of the eighteenth century it was refronted with characteristic care and beauty. In the nineteenth it was carelessly and meanly divided into three tenements. Its walls, roofs, and floors are sound. It is overcrowded and the tenements are not fit dwellings. To rid the township of the discreditable conditions the local authority has in practice only one course, namely, to condemn and demolish the house and get a grant from the Ministry to build three new ones. The economic and intelligent thing to do is to order the inhabitants to leave, to recondition the house so as to be good for use by two families, to build a new house for the third. But because the Act does not allow the provision of any national finance for such a course, the nation will undoubtedly suffer a waste of money in destruction and new building; and also you and I, reader, will be robbed of the very proper pleasure which

is ours, the enjoyment of ancient simple architecture of a kind which can never be recovered, however well we may build to-day and in the future.

There is an Act, however, which permits the owner of such a house to apply for help in its reconditioning, but the help given is not so great that he can avoid spending relatively large sums himself. This, many small owners cannot do. Their houses are mortgaged, and have been bought under a belief that if they do not allow them to get into worse condition, they will produce a certain rent. In a word, the present Acts work for the destruction of many small, useful, and most agreeable buildings. In the changing England that we are welcoming, this present waste will be stopped, and houses which are valuable to us will be so cared for that they will continue to house folk suitably, giving pleasure and interest to all who see them.

At present England suffers from two evils in regard to the houses that must be newly built. It suffers from an overstressed delight in the quality of permanence, and it suffers from building by-laws which make the cost of housing the people take an excessive proportion of their income in rent. The

standard of living is burdened by the standard of housing.

As true education extends in our new England, folk live more lightly than they did. As our economic system develops, they will also become more mobile and less fixed to certain sites. These tendencies should be accepted and encouraged. Manufacturing populations should be capable of moving as the centres of industry move. Houses should be built so that they can be taken down and the earth returned to the plough, and this without real economic loss. At present unemployed masses are apt to get tied to useless and uncomfortable centres because this cannot be done.

What then is needed? The local authorities should have power to control the use of houses and should be given financial help to recondition old ones equivalent to that which they now have for building new ones. Further, provided old houses can be made pleasant and healthy to live in no attempt should be made to apply to them the standards of the present by-laws.

And as regards the by-laws which control the building of modern houses, these should be brought into accord with the use of the newer mass-made building materials; instead, they are now based

on the building methods of the late nineteenth century.

There are those, and they form a very vocal group, who insist that no houses can be pleasant unless the methods which were traditional no later than the eighteenth century are revived in their building. If this view is accepted, healthy development will be hindered. At no time when a noble architecture was growing was it hampered by such aesthetic theories. Beauty is quite able to join company with any sensible way of building. She is like happiness, and appears as the companion of sensible living. She is not to be sought separately. In the matter of housing she lives in the kindly finish given to any material suitable to man's purpose.

It will be necessary to limit the free activities of the adventurous folk, who, without a natural sense of the current social spirit, exploit the social need for houses. They should only be permitted to build houses for sale and letting if they are willing to do so in accordance with the closely defined programme of the district. They would suffer no more inconvenience from such control than did the speculative builders of the eighteenth century who erected well-planned streets, squares, and houses

on the estates of the great eighteenth-century land-owners.

In such an England, and it is no impossible Utopia, a liberal-minded people will live full well ; and by chance will find itself the envy of other nations.

## LETHABY'S *WESTMINSTER ABBEY*

WE all know the story of the learned author whose book was sent back to him for review, because no one else knew enough about the subject on which he wrote to make it possible for any other man to undertake the work. I am very much in the position of one of those other men ; but if I fail to disclose the real worth of Professor Lethaby's *Westminster Abbey Re-examined*, I hope to write something which will excite the interest of some who like myself know relatively very little of this building, so that they too may be impelled to read the book, for to do so will be for their enjoyment and for the good of modern architecture, and this whether they themselves practise or are laymen.

The first quality of the book that stands out clearly is the fact that it very much helps the reader to realize how fine the Abbey was and how richly finished when first it was built. The Abbey is not treated as an example of Gothic architecture from which to make or prove rules for thirteenth-century forms. The buildings are studied in order

that they may be better understood as a great work of English architecture. And as the lover of literature likes to know the names of the authors of his favourite poems and the other works they wrote, so Professor Lethaby seeks to recover an account of the great artists who worked together to complete the Abbey.

That the vision of Westminster Abbey in all the beauty of youth has been more nearly made apparent is an achievement for which we must be grateful. It is worth our while to try and see how the author has succeeded in doing this.

On analyzing the contents we find no 'fine writing' and few words of superlative praise except in quotation. Professor Lethaby has been content to tell a plain tale commenting on the evidence for, and suggesting the forms of what is missing, occasionally stating the arguments that make him differ from other authorities. By these means he raises in the mind of the reader some idea of the complete building that was, and of the rich and rare works with which it was furnished and adorned.

The book contains fifteen chapters, illustrated by many sketches by the author. By giving the headings of some chapters and by quoting some passages I may succeed in my purpose of interesting

the reader in this book, if indeed such an attempt is necessary, when all know that it is foolish knowingly to neglect a book by W. R. Lethaby.

Of the chapters that most appealed to me were 'The Transept and Great Portals,' 'The Chapter House,' 'Sculpture and Sculptors,' 'Illumination,' and 'Altar, Shrine, and Choir.'

In regard to the east end :

The interior of the ring of eastern chapels has been so terribly pared down and put into a modern casing that it looks like a convict's garb, compared with what its ancient, graceful beauty must have been. The setting out of the complicated plan is so exceptionally accurate that it is evident that the first work was begun, as a whole, on a cleared site.

Of the front of the North Transept in its original form :

The transept front, it cannot be doubted, was pushed on with the earliest work undertaken—that is, it was begun in 1245. The King would have been specially interested in these splendid doorways. From what is known of it, and as an important work built in the middle of the thirteenth century by the connoisseur king, this front may be regarded as the supreme example of our mediaeval art. A student who would make a trustworthy drawing of the front, by carefully bringing together all the evidence that can be gathered with the least possible amount of conjecture, would make a valuable contribution to the history of English building.

The tomb portraits of Henry VII and his Queen, with a third figure of the King's mother near by, all of gilt bronze, are really great works of the Italian Renaissance by Torregiani, the contemporary of Michelangelo. They follow the tradition of Donatello and, if they were in Italy, they would be noted among the most wonderful things that could be seen on tour.

### On the Choir Hangings :

In Flete's account of Abbot Barking, who died in 1246, he tells that the abbot gave to the church 'two curtains or dossals of the choir' on which the Life of Christ and the Life of St Edward were represented in beautiful work. They were in being as lately as 1631; it may not be doubted that a complete suite of hangings for the choir existed. At Canterbury and elsewhere we have records of similar choir hangings.

And Professor Lethaby ends his book by quoting most appropriately from John Carter, 1799 :

Again farewell, and may these essays have some influence over thy future welfare. Then shall I think my labours well bestowed; and my happy spirit when disrobed of mortal clay will ever dwell a guardian genius to protect and guard thy architectural glories to time immemorial.

I know only of one work of modern times on which all the first artists of the day were employed, and it is evidence of the strange civilization in which we live that, unlike Henry the Third,

the reigning Queen has employed these modern masters not on a building but on a Toy. Had the reverse been the case, one wonders how many from the crowds that went to see the Doll's House would have gone to see a real Church, Hall, or House built and adorned for the honour and use of man.

The following translation of the Anglo-Saxon deed under which Brithmer gave this Church to the See of Canterbury is of value *now*; it states clearly that Brithmer made the gift so that All Hallows Church should be maintained for ever. The deed was made in about the year 1050:

Here is shown in this writing concerning the agreement which BRITHMER of Grasschurch made with STIGAND the Archbishop and with GODRICH the dean and with all the brotherhood at CHRISTES CHURCH at CANTUARBERY: it is then that he granted to CHRISTE and to CHRISTES CHURCH the homestead on which he dwells and ALLHALLOWS CHURCH after his days and after EADGEFA his wife and after his children's days, EADMERЕ and EATHELWINE, on condition that they should have endowed it to the best of their ability for the redemption of their souls and on condition that the brethren should take heed that the service which should belong to the church henceforth might not decay nor all that for which the church was endowed fail.

Here to bear witness LYEFSTAN portreeve and bishop,

and EYLWYNE stikehare and many others of those within the city and without.

The new year issue of the *Architects' Journal* (1926), edited by Mr Barman, contains four articles of major importance.

- ‘A Review of the Year's Work,’ by Professor C. H. Reilly.
- ‘New Work of Sir Edwin Lutyens,’ by Professor A. E. Richardson.
- ‘The Work of Mr Clough Williams-Ellis,’ by John Rothenstein, and
- ‘Recent Post Office Architecture,’ by Lord Gerald Wellesley.

I wish Professor Reilly had spoken his mind about the buildings which he has chosen to illustrate, the Architecture of the Year. It is easy and safe, for instance, to say of the New Hall of the University of Bristol that it is ‘probably the greatest pile of definitely Gothic buildings since the Houses of Parliament.’ Does Professor Reilly or do the Bristol undergraduates think that this work is appropriate to the year 1925?

Professor Richardson voices in easy language orthodox views of the work of Sir Edwin Lutyens;

but 'what is his own opinion?' There is indication that it is not that generally held 'I myself follow a line of thought that is widely divergent.' What is interesting to the reader is not the accepted view repeated constantly, but this widely divergent opinion. The work of Sir Edwin Lutyens is an excellent medium by which to disclose this.

Mr John Rothenstein has written of Clough Williams-Ellis, and the article tells of the growth of the architect's interest in his profession. It is clear that Williams-Ellis has much more than usual ability, and his work is becoming more interesting as his practice increases. He shares with some great men a touch of the elaborate charlatan, but this superficial and picturesque quality is carried in sound foundations, and is not without an exciting value when it is allowed to appear in his architecture.

The article on Recent Post Office Architecture shows that a government office can give the public truly fine buildings. Not one of the nineteen examples shown is such as would not increase the reputation of a leading architect. One wonders why no photograph of any of these buildings appeared in the recent exhibition of the Architecture

Club. This article is especially recommended to the notice of the directors of the Great Banks ; for there is no reason at all why every country bank should not be as pleasant to see as are these buildings.

## BEAUTY HELD TO RANSOM THE EDITOR *TIME AND TIDE*

SIR,—I have read with interest Miss Hamilton's article, 'Beauty held to Ransom,' in your issue of 5th April 1929.

At the present time the only accepted way in which to preserve the beauty of the countryside is to take the rather depressing and hopeless course of opposing alterations that definitely change it.

It is clear that it would be better to give help and encouragement to those who seek more sunlight, better access to fresh air, and a healthier life, than to oppose their efforts to get into and enjoy the country.

Almost everyone who has means builds for himself some sort of dwelling on ground which until then has been agricultural, so that he may get for himself and his family the benefit of fresher air, of the sight of green fields, and of growing flowers. This is particularly so now that the character of the population of England is becoming more and more urban. That he should do so

is excellent for social reasons ; but the multiplication of small houses does definitely change the character of the country, taking from it the quality which we have recently learned to admire.

It seems to me that we should accept this change as inevitable, and while it would probably be well to forbid new building of any kind but that which is connected with rural industries in certain chosen districts, the real cure for this change is to follow the example of the builders of the Middle Ages and, instead of crying out with horror at each new house, to consider it with pleasure and pride. The face of the country has already changed from a wild lack of cultivation to the well-ordered fields that we know.

If we are to do right by the changes to the country which the present civilization brings with it, we must, instead of trying to continue an un-economic manner of living and building, recognize the changed conditions and frame our lives accordingly. That is to say, artists and architects must help this new week-end and semi-urban population to plot out the country and build their houses in a manner that does not flout the economy that time has imposed on us.

We should give our time to discover how best

to assemble the machine-made materials which are suitable for the semi-temporary building that present-day economy demands. Until the small houses, which have been habitually described as 'bungalooid growths,' are taken seriously as architecture, all the talk about preserving the country-side will be in vain. The truly *modern* domestic architecture of England is the architecture of these houses. Yet while we architects boast that the best houses in the world are being done by us, we take but little thought how to improve these *really modern* homes of England. Because they are 'called' ugly every architect will refuse to consider them seriously. By the rising generation this word 'modern' is only applied to architecture based on the manner of MM. Le Corbousier and Mendelsohn, whereas in reality it should be applied to the everyday structures of the town and country builders.

A difficulty that confronts us in considering this matter is the fact that by training and association our ideas of beauty are founded on the monumental architecture of the mediaeval tradition. While we rightly enjoy and should certainly preserve the noble buildings of this kind, there is little doubt that in the best interests of the country-

side, we should cultivate a new kind of pleasure, a pleasure to be had from the seemly assembling into less permanent houses those very machine-made materials which the founders of the Save the Country movement cry down as horrible.—

Yours, etc.,

A. R. Powys.

## REVIEW OF 'LAWRENCE WEAVER'

By CLOUGH WILLIAMS-ELLIS

It is difficult for a friend to write a memoir of one who has died. Maybe it could be done by letter to someone who had for some years been away ; but beyond a plain narration of facts, to appraise one's friend publicly is almost certainly to present him in a perspective that is out of drawing : his height will be exaggerated, and his dress too richly coloured. It was with something of this feeling that having read it I put this book into my bag some days ago. But now, thinking it over, Sir Lawrence Weaver takes place in my mind a fuller shape than ever he did when I occasionally met him in real life, for then (not being one of his closer friends) I knew little of his early days. Before the war I used to meet him in the offices of *Country Life*, when I had a pretty shrewd idea of his value to that paper.

Mr Clough Williams-Ellis's book, then, brings his friend to mind, a real person, and we remember the good he did. It is notable that those men who

suffer from cramped and confined minds, willy nilly seek to prosper by exposing weakness in their rivals. Who has not heard this when architects talk together, and Doctors of Medicine, are they less jealously critical? But whereas the common kind of man strives to raise itself above its neighbours, Sir Lawrence Weaver was raised among his fellows by them, and to use a metaphor, was borne aloft, the maker of a happy and winning century, by his applauding friends. He helped men to good fortune, men who deserved his help, and as he did so he was buoyed up on their successes as a boat is inevitably lifted by the wave.

So easily did Sir Lawrence carry his success, that it was easily assumed that he was never without it, wrapped about him like a cloak, but this, Mr Ellis will tell many who knew him little, was far from the case. His father vanished from his mother's life when he was young, and it appears that he was freely brought up to use his own brains, being steered rather than directed. In this book his relationship with his mother is suggested, and the suggestion is one to be envied.

His influence in architecture was felt while he was alive, and in this book is described. None who knew him doubted the value of his guidance,

but here we learn that he not only 'spotted' the winners, but he also trained them to success. The various appointments he held were the better for his service, but he seemed to the world to hold them lightly as a means to encourage men to a more generous way of life rather than as a duty to be ponderously performed. Keen on interesting the dullard in the sparkle of life, in its good things, in its pleasant gardens, and in its gracious terraces, he did not, like the ordinary missionary, attempt to get his creed accepted by carefully built Euclidean argument. He did it by stimulating a living interest in unexpected places, by leading men to peep at sunlit scenes, much as the tripper to the hill outside Rome is made to view the whole City crowned by St Peter's through a keyhole. He stirred men to share his interest through the mind's eye rather than through the mind, and they continued to seek that visualized beauty as men seek to make real a happiness that has as yet been imagined only.

Those who enjoy the writings of Sir Lawrence Weaver will wish that Mr Ellis had added a list of his books. One of those which I particularly remember, both as characteristic of the author and as probably the best short book on the subject,

is his book on Christopher Wren. It reads as easily as it must have been written, and is accurate and scholarly, but in no place heavy or pedantic. He had a buoyant mind, but 'twas anchored in reality. Indeed, it was Sir Lawrence Weaver's particular merit that he could write seriously and lightly at the same time, and the reader's suspicion that he probably lived in like manner becomes more and more an accepted opinion as his friend Mr Williams-Ellis's book is read.

## ORIGINS OF BAD ARCHITECTURE

THIS article contains an attempt to find the causes of bad architecture. To find them it is necessary to seek elsewhere than in existing buildings and in their style and structure ; we must, in fact, look into the minds of those who brought them into being, and more especially into the conditions which influenced those minds. Since the authors of by far the greater number of buildings are unknown, it is the conditions and influences prevailing in different eras that most deserve our study. We must try to learn the theories that prevailed in one or another generation, we must appreciate the state of human development of the age when the most admired buildings came into being, and in this way discover the human urge from which the buildings derive. When we have finished these investigations, we shall be in a position to speak with some confidence of the origins of bad architecture and so learn for ourselves some guiding principles which, if observed, will make bad architecture difficult or impossible. It seems im-

possible in these days to carry through any work without having reasoned principles in support of what we do. We want to be able to justify our decisions first to ourselves and afterwards to the public and our critics.

In the course of this article it will become apparent that dependence on reasoned theories is a main cause of the unhappy state of architecture ; and if this conclusion is accepted it will equally be seen that the search for causes, and the discovery of principles, with which I am now concerned, are only justified as a means of escape from those false theories that exist, and that, when once that escape is made, it will be well to forget what has been found out about the matter, and again rely on more primitive impulses nearly unsupported by reasoning. For the root of our failures rests with theory-mongers ; that the defeat of these false reasoners can only be achieved by means of their own weapons is the justification of the use of these same weapons in this article.

In certain periods of the world's history, and under the impetus of certain civilizations, monumental architectures have thriven, giving full and perfect enjoyment. And in all countries, in all times, except perhaps in our own civilization and

age, a lesser architecture that is wholly admirable has existed, born of an impetus of like nature. It is to be noted that the creative impulse in each period was confined, by an accepted outlook, by a very slowly varying technical capacity, and by the state of scientific knowledge. Within those limits alone, played reason.

The forces producing this architecture evolved, as did the human race itself, without being conscious of their course, and much less of the end to which they were moving: The virtue of admired building rests in a similar evolution—that is, it rests in an immediate, and often an unaware, response to mental and physical environment, each equally accidental as far as man's conscious direction is concerned.

When architecture has been wholly admirable, it has grown in such unquestioned cultural backgrounds, and has taken hard tangible form through the *digested experience* of a generation; and sometimes it has been lighted with the glow of that experience shining through a single mind. By 'digested experience' is meant the subconscious result of experience, or in other words the certain feeling and assured knowledge which are in a man without resort to conscious reason or thought. A

shepherd's dog responds without thought at his master's signal. A mason in the fifteenth century knew at once what was wanted when he was told to hew stone for a three-light window. An assured maker of a wall, without resort to calculations, knows what its thickness should be; and in the very complicated matter of architectural design, the architects, or builders who gave us the great monumental buildings knew, without resort to rules, the general mass form of the whole; and caused its parts to be moulded or left plain in response to an unreasoning sense of fitness, perhaps after more than one vain attempt of the conscious mind to interpret a felt but undefined desire.

Digested experience is akin to instinct. It is akin to the untaught knowledge of a cat that eats grass against some bodily trouble. In the complex matters of architecture, without reasoning about the factors, it causes a man to give the right answer, no factors being neglected. Reason is used by an unfettered and an unchallenged man to temper his conclusions. It is used to explain his achievements, to those who rightly or wrongly want to know the 'whys and hows' of the matter. When such reasoning is used, it sometimes is convincing, but it may, on the other hand,

give the wrong answer. Reason, as was the case with the instinctive motives of the old builders, also draws its nourishments from digested experience.

Beating about the bush of architecture to find the nature of the air it breathes, and the moisture it draws up into itself and the soil that is essential to its life, we are compelled, whether we will or no, to some consideration of the virtue of man. This virtue though equally limited by physical conditions is within these boundaries equally capable of unlimited development.

The search for virtue in the human race and in the individual has been likened to the search for light by one imprisoned in a dungeon, where the darkness is broken only by one ray so small that its passage appears limited by the size of the hole made by a pinprick.

In the infancy of the race and in the youth of a man there is an impulse to approach this distant light, yet with every step towards it it is found that though the light becomes brighter it also recedes to farther infinite distances. It is ever more and more inaccessible while yet it is ever more and more attractively brilliant and of greater volume. The seeker's impulse is increased by conscious desire, and he is driven forward by both the spur of his

mind and the diffuse veiled forces of his multi-spaced environment.

I would ask the reader to consider and hold in his mind this simile, for I desire to use it further as a help in finding out the causes of so much that shocks and is offensive in the art of architecture.

Such a ray piercing the gloom of a dungeon appears as a cone of light bounded by darkness. The base of the cone is distant and the observer looking towards it feels himself standing near the apex. The man, or the people, moves from the apex towards an ever-receding and ever more remote cone-base of light that grows infinitely in circumference as it seems to become more firmly present.

Before using this simile further, let us consider for a moment the unity of virtue. Now, after countless years of human speech this single and indivisible unity has, in the human mind, been broken up into separate sharply edged facets so that it no longer appears one. One man reaches for truth, another for justice, some for grace, and others for beauty. There are many more facets but they need not be counted or named here.

Man is apt to stress one value more than another, to lose the natural balance of life and to become

that uncomfortable companion known as a 'crank.' Guided by the impulse of digested experience he is more safely certain to reach the single essence of virtue that is possible within the range of his development.

In the symbolic three-dimensional picture I have imagined here, the even reception of the full circle of life is perfection<sup>1</sup> in each plane of the light-cone where the circle lies. In the early development of a man, or of a race, this plane-circle lies near the apex from which he starts on his way. In the later stages the light-circle is of greater extent as it is farther from the inverted apex. But imagine these light-planes divided into measured areas named with the name of some word-virtue, and imagine the pursuit of one or other of these areas to the exclusion or neglect of others and the balanced evenness of the plane is broken and marred ; it is no longer *perfect* in its place.

Nature knows the number of these facets without counting ; man, relying on his brain and reason, is apt to omit some numbers in his counting and thus to reach an error-bound conclusion.

Thus early man, striving at the beginnings of

<sup>1</sup> I have used the words *perfection* and *perfect* throughout this article in this sense.

such a cone to follow the growing light, is perfect, though it is of his virtue to murder and to steal; for as man emerged from the animal, moral conceptions such as have since developed did not exist. It was then natural, in the order of life, and therefore good, that he should do such things. Doubtless they were necessary to the development of his kind as they were to maintenance of his life. To each successive plane a greater virtue belongs, and to the infinite successions of light-planes yet before us belong greater virtues, and a greater understanding of them than to any that we can now be aware of. And these greater virtues, with their better understanding, will be reached by the use of digested experience.

I desire the reader to apply these symbolic illustrations and ideas to the development of architecture.

The building that is held admirable by all is that which most wholly spreads its being across its proper light-plane in the cone of architectural virtue. And it is in degree bad and imperfect when it reverts in part or whole to planes already passed. To each belongs a fitness that is as naturally beautiful as the movement of a panther stooping in quietness to lap water, or in passion springing

upon its prey. The Parthenon, the Church of Santa Sophia at Constantinople, the Nave of Durham Cathedral, King's College Chapel at Cambridge, the Portico of St Paul's, Covent Garden, in London, are all perfect in this way ; and none of them would be perfect had man, using his reason and his brain, applied them to any other plane-circle of this imagined cone than the one upon which they inevitably appeared. Their perfection lies in their true and balanced evenness in their positions in the cone. In none of them is one virtue stressed beyond others ; and in those buildings that are most the outcome of digested experience, tempered by reason born of their immediate *present*, is most excellence found. By the word 'present,' as it is used here, I mean all that was present when these buildings came into being — everything, visual, tangible, and cultural, which impinged directly or remotely on consciousness then, everything to which the thinking mind of man responded by action. In buildings that fail to be wholly admirable some word-presented virtue is stressed to the neglect of the single unity. Such buildings sprang from a reasoning dragged from outside the age-thought of their proper plane. A practical example of this may be seen to-day in

the attitude of one group of people, that is, in the group which *echoes, without digesting them*, the words and phrases that the leaders of the Council for the Preservation of Rural England movement, or of the Society for the Protection of Ancient Buildings movement, have used in relation to some special case. Because the Society for the Protection of Ancient Buildings admires and seeks to preserve the perfect buildings of earlier days, and because its action in this is seen by mankind to be good, the thoughtless, using the word-created arguments and not allowing themselves to be guided by digested experience, assume that a new building formed of once useful materials and in a once sensible 'style' must in our own plane to-day be equally good. Such a building is not of it, and is therefore awkwardly set in an unfamiliar world. It does not belong to the age. Those old buildings that are good, or perfect, are so because in their day they evenly filled their plane-circle. They deserve preservation; for their perfection, by a strange twist in time, outlasts their age.

The disciples of the C.P.R.E. who understand its objects *only by word and not more deeply*, seeing the England of other days perfect, and seeing the England of to-day disturbed by the stressing of

virtues stolen from an unknown future, and taken from an unbalanced present, cry out that England should stay the movement of her feet and cease to follow the increasing light of receding virtue. They are dissatisfied with the principle that inevitable development should be tempered but not led by reasons born of brain. They cry out against the building of roofed homes unless these accord with the manner of a plane long left behind ; they cry out against the natural customs of to-day and neglect to put their energies into the service of these. They demand the use of local materials, a use which has become a burden to the man who needs to build ; they demand that England shall live in accord with the catchwords of a few men who do not know that what was once good is now bad, and who, trusting to reason, but omitting in their reasoning many factors, declare that the use of machine-made materials is to be condemned.

If in this half-philosophic, half-geometrical approach to the study of architecture there is insight, there must be added to it the presence of other co-existent planes of well-related virtue.

For moving through the planes I have visualized are other equi-present even planes that in the

nature of architecture must be respected if perfection is to be had: if they are ignored unhappy disorder must result.

These planes are to be thought of as being without number, but at the same time they are, as we have seen of human virtue, one alone. For our purpose here, because we are using words and therefore do not clearly feel this unity, we will name a few of the planes that seem at the moment neglected or profitable to be considered.

First among them then is *Proportional Economy*. A keen mediaevalist, or a man sensible of beauty and goodness, enjoys equally the Quire of Lincoln Cathedral, and the great barn at Harmondsworth. Yet these are very different for other reasons than the difference of size, use, and material. For our immediate purpose the difference caused by an unconsidered, or perhaps I should say an automatic or subconscious, respect for proportional economy is the most important. The elaboration of the Lincoln Quire is proper to its purpose, and to the right pride of the Church at its building in that day. It is costly in moderation if the glory attached to its purpose, and the intended influence of its whole and parts on man, are accepted as they were when this pile of shaped

stones first gave the noble hill from which it rose the greater nobility it still possesses.

The great barn at Harmondsworth is plain ; no moulding and no carving is there. Its equal beauty and its equal fitness derive from a sure sense, which was so unquestioned as to need no assertion, reasoning, or argument. Displays of human skill were outside the demand of a building made for purely economic purposes. This undoubtedly right sense of what labour should be allotted to elaboration I call *proportional economy*. And the same quality can be seen in contrast in the great Elizabethan houses, and in the contemporary cottages of wagoners and shepherds. Both are perfect architecture.

In the two buildings chosen we have direct comparison of proportional economy in identical cone-planes of English buildings. A similar contrast can be made between buildings designed for a common purpose in different ages. The barn at Harmondsworth was framed of oak at a time when no man doubted that the agricultural methods, that the relationship of man to man, and that the development of the arts and sciences were stable. The people were assured of the continuance of the conditions which then existed. This prevailing

outlook being unquestioned it was natural, proper, and reasonable that in building a barn it should be made as durable as possible, so that the work need not be done again. Thus barns of that period are *Monumental Buildings* of significant importance. It was in accord with proportional economy that they should be so. To-day even if oak were as easily to be had as deal or pine, to build a barn so durably were foolishness. For to-day we are aware of tendencies towards change on all sides. A building erected for use in a changing trade is wisely built in a temporary or semi-temporary manner. We find, therefore, that the quality in buildings which I call proportional economy, though it remains a guiding principle, is applied differently to those of like kind in different ages and to those serving different purposes in the single age. In old days this quality expressed itself without deliberate thought by man, was, in fact, the result of digested experience ; but to-day the even balance it should present is often marred by an excessive respect for and insistence on some other quality. For instance, a man may insist on the mean-cheapening of parts, or, in obedience to some self-made theory, order an excessive display of cunning craftsmanship ; and he is very apt in

a single building to emphasize this error by a display of both extremes. Excesses of this kind are derived from temporary fashion, or from personal whim guided by theories based on ill-balanced reason. They have nothing to do with the dictates of an unquestioned experience. As we wander in country places we may come on the undercroft of an Abbey Refectory standing alone and now used as a cowshed. The appropriateness of its carved vaulting is related to its old purpose and not to the shelter of cattle. We recognize its architectural perfection in that relationship, and would all feel the absurdity if to-day anyone should build for his beasts chambers of like elaboration. Were this done a quality of true architecture would be wanting, though in it forms perfect in other places in other times were accurately reproduced.

Another plane in the architectural cone of development, which is to be recognized in old buildings, affecting their form and nature, is that called *Traditional experience*.

Now traditional experience in the matter of architecture is of two kinds. There is the tradition of the workshops and there are traditions in the forms used. The second of these two is that

which is now spoken of as 'style.' I reject the word 'style' as having to do with tradition, for to-day style is consciously chosen and is not inevitably accepted as though there were no alternative. Style in this sense is deliberately and consciously decided by the brain; and when it is derived from digested experience and from the full evenness of the 'cone-plane,' it is no more recognized as style to-day than it was when the Greeks raised temples, or when, in the Middle Ages, the new cathedral at Salisbury was being built. Style in this modern sense has to do with another quality than traditional experience. It is a matter of *culture*, and of this I shall write presently.

Among other sources of nourishment, architecture grows from the traditional experience of both the workshops and the machine-shops. Yet when a man speaks of traditional methods to-day he is usually referring to those which thrived of old in carpenters' shops and smithies. These old traditions now hardly deserve that name, because they are seldom now naturally preserved by visual and spoken example, except in places unaffected by the existing factory traditions; their place is taken by these latter which, though different, are in

direct descent from those of older days. The old traditions, which most men alone recognize as traditions, are those which served so well the English builders from the days of the Norman Conquest to the end of the eighteenth century. They changed but little in all these years; and because they were, as tradition always is, closely associated with economics and economical life, they were in continuous being until the coming of the Industrial Revolution. On looking at the wholly admirable buildings of the past we see that they are obedient to the workshop traditions of their time, and it appears that this obedience is essential to their perfection.

There is no reason, except for his lack of archaeological knowledge, and for the general good sense of the building tradesmen of that time, why a man of the Middle Ages should not have argued that the craftsmanship of Ancient Egypt or even of the Stone Age had merits that his had not—and this statement would have been true—and from that argument have concluded that his house or his church should be built with no other tools than those used by the Palaeolithic men or by a people newly learned in the use of bronze. Had a man acted on such a theory he might, with diffi-

culty, and with excessive expenditure of labour, have produced a work of architecture that was interesting. But the building would be shown to students to-day as a curiosity rather than as a work to be enjoyed, wholly admirable and perfect. A race of men suddenly appearing on earth to-day, and ignorant of our bewildering wordy arguments, and of our very self-conscious talk about 'traditional' methods, would, without hesitation, adopt those prevailing to-day ; and naturally following the digested experience of our age, and our usages, would raise some wholly admirable works in a manner unseen before. And it must be noted that although their building would appear fresh and original, nothing about its parts would be strange or unusual. Modernity in practice would not be stressed, it would be present as naturally as it is in the newer coaches of the London Tube Railways. What is certain, is that there would be no revival of past methods and no conscious stimulation of those that are becoming obsolete.

Of the second quality of tradition in architecture the quality which concerns 'style,' there is less to be said. In all ages this art has been dependent on visual reactions. Architecture is conceived in the mind's eye. In making a new building man's

thought derives inspiration from his mental vision.

At the present time little building is done without conscious selection of form, a selection made out of a crazy notion that 'style' is something to be given to the building apart from itself. There is nothing traditional in this selection of style. To re-use forms familiar in old days is no more traditional than it is to hide the structure of a building behind a pose of jargon-learned modernity.

It is well to be clear about this matter of tradition in form. I am not just now trying to show that a reversion to an old form, or an attempt to steal from the future newer forms than any at present existing, is a way to achieve bad architecture, though that may well be; what I am trying to show is that in neither case is there obedience to any true tradition, except by accident. Tradition in form endured in the development of architecture in the best periods of Greece, it also persisted without question, though in a less settled way, through the Middle Ages in Western Europe; and the reader can, without difficulty, add other examples to these two.

Before I leave this facet of this cone-plane of

architecture and consider the one that closely adjoins it, namely, *Cultural experience*, it is worth while illustrating my meaning by reference to a short and not very interesting tradition in architectural form—a tradition that was clearly derived from an expression of the art originally based on cultural selection. All who have read anything of English architecture know how architects, builders, and the lay prophets of the art, turned in the eighteenth century to Rome and to Greece for inspiration. They applied to traditional English houses and churches forms that had been traditional in distant countries some two thousand years before. Yet, the use of these forms through one or two hundred years in England was so regular that the speculative builder of the second quarter of the nineteenth century knew nothing of their origin, and used them with the same native assurance as did his ancestors the traditional forms of the thirteenth century, when they set, one beside another, window masonries in a form which the historians of architecture have since called 'lancet.'

In the opening articles of the first number of your *Journal* Mr J. C. Squire referred to a humble street built in this manner: he referred to Ravens-

court Gardens in Hammersmith. The plasterer who gave the fronts to these small houses a sense of leisured respectability had that quality in mind, but he knew nothing of the architecture of ancient Greece whence the forms, to which his templates were cut, were derived. In that day a cultural architecture had become traditional, only to die before the newer culture of the English reigning house.

This subject of 'Style' is important to-day and has been important in the architectures of the newer civilizations for more than two hundred years. It is immediately connected with the cultural outlook of a race. When Inigo Jones designed the Palace for his King ; when Sir Christopher Wren argued with the Dean and Chapter about the forms to be used in St Paul's Cathedral ; and again when the President of the United States of America, Jefferson, designed for himself a Country House—they were all working under the powerful influence of a cultural wave. It was not to be ignored. From it sprang their daily thoughts, and it would have been in the nature of conscious artificiality had they avoided the consequence.

The cultural wave stirred the bedrocks of traditional experience, shook adherence to the old forms

of buildings, and in a few years broke down the old use of mouldings and their arrangements. But the older traditions of the workshops remained for a while, and with but little modification still proved their worth.

It will be useful to our examination of the matter under consideration to survey the result of the cultural experience of this period, and to see if it maintained the existing beauty of architecture, if it added to it, or if it took something from its merits. I think it will be agreed that of all the works of this period in England, those which have unquestioned excellence are the ones wherein the cultural outlook is least stressed. We remember the new portico at old St Paul's, we remember the super-culture given by Lord Burlington to his Chiswick Villa, and we think of the overbearing porticos added to the decent houses of the country squires. In all these cultural experience seems overstressed. But in the Palace and hospital at Greenwich, in the new St Paul's Cathedral, and pre-eminently in Hampton Court Palace, this influence has remained well upon and within the 'cone-plane' of architectural development.

I think this statement expresses the conclusion of the generations that have lived since this cultural

wave receded to mingle again with the wide waters of human life. To-day it appears to me that the prevailing urge of cultural experience grows from a natural pride in the newer powers which man has gained over the physical world, and in the manipulation of the materials latent in and produced from the earth. It is in the conscious use of these powers under this cultural urge that a danger to architecture lies; and it is from the natural acceptance of these powers without too conscious a pride in them that I believe the glory of an architecture fitting and harmonious will presently be derived. Indeed, here and there, it is with us to-day.

I think the designer of the new Olympia building in London will forgive me if I use his work in illustration of this matter. To me it appears that a forceful insistence on the cultural outlook of to-day has occupied his mind wholly, and that in this building there is evidence of a deliberate refusal to obey the demands of normal experience. The cultural outlook has overburdened this structure and the balance of merits has gone. Were the qualities possessed by it found in a man, he would be avoided as being both a loud-voiced crank and a ponderous bore. Further, he has also offended

against Proportional Economy as applied to a single building ; for the cost of the materials with which this building is faced is in excess of that which could be spent on it with balanced seemliness, for the spectator is compelled to recognize relative economies on the flanking walls. If I were to point to new English buildings which to my mind lie altogether within the cone-plane of current architecture, I should direct the reader's attention to the new hall of the Horticultural Society near Vincent Square in London, or to the newer architecture of London's Underground Railway Stations.

In the second half of the nineteenth century, a zealous, but very narrow and unbalanced, insistence was devoted to a quality in architecture that before then had not been consciously considered. Reason leapt to discuss this quality, and omitting to relate it to the very many proper attributes of good architecture, gave a twist to man's approach to this art that only the deep and almost blind needs of the race have begun to straighten out. This quality, so thrust out of its place into prominence, was *moral honesty*. The ancient plaster was stripped from the walls of mediaeval buildings so that the 'honest' masonry might be seen, layers of

lime-wash were cleaned away to expose the nature of an equally 'honest' plaster, and decorative painted stone joints on walls evidently of early thirteenth century were pointed at with wonder because no moral reason could be found to justify their presence. The very beautiful graining painted on oak or deal joinery in the early seventeenth and in the eighteenth century were condemned as deliberately deceitful, no consideration of their beauty and the skill of the artists was for a moment allowed to throw a doubt on their complete immorality. The architects of this age hardly dared to face brickwork with stone. The technical advantages and the great beauty of veneers in wood and marble were forgotten in the desire to expose a deception. There are few now who, in the relationships of human life, do not know that an excessive and conscious search for honesty produces, in a most disagreeable form, the opposite attribute. Thus it was with the architecture that came into existence under this impulse. A man is honest when he is normal, and a building that is not built to deceive and that is not formed to parade the virtue of moral honesty is like him both honest and normal. An oak tree or a beech tree, which has had opportunity to grow to its

full stature and girth, has exceptional beauty in the expression of its *normal* functions.

The proper development of the normal in architecture excludes the possibility of conscious deception and of paraded honesty, and of its kind is equally a potential part of rare perfection.

This theory of architectural honesty will shortly occupy small space, or no space at all, in our conscious approach to the subject, and like it some other theories will disappear, for they are the result of reasoning based on a part only of the factors that are necessary to a proper conclusion. It is inappropriate here to make reference to all these theories. But one among the others, one that occupies now altogether too much space in the minds of one school of thought, is *the theory* that good architecture depends on the use of *local materials*. In no age except our own has this theory been advanced. But it is probable also that in no age has so much ill-founded reasoning been applied to architecture.

If I say that two factors have ruled the choice of material in the erection of a building my readers, from that which has gone before, will realize that this number is chosen, not because it is true or final, but because through the medium of words it

is impossible to do otherwise than separate ideas, causes, and factors which in reality are parts of a single whole, and which cannot be separated from that whole without causing, or proclaiming, error. With this reminder I will select these two factors and name them.

The choice of materials in notable and wholly admirable buildings has always been dependent on proportional economy and on function. In those times, when local materials were so often and so successfully used, builders did not hesitate to bring laboriously from a distance materials which on occasion better served their purpose. English cathedrals were built of stone from France. Norfolk churches were raised from the stone quarried in Northamptonshire, and, in America, the visitor is taken to admire buildings made in the seventeenth century from clay dug from English soil and fired in English kilns ; and he inevitably responds to them in the way expected of him.

I have attempted to divide the unity of architectural perfection by isolating certain qualities so that I could better write of them, but because that perfection is single the division can only be indifferently made. The quality I must now consider separately is that which is included in the *aesthetic*

*approach* to this subject. Perhaps, of all others, theories about beauty have been the chief cause of bad architecture. Yet word-built reasoning compels many minds to hold that beauty, of all qualities, is the most important to be sought for architecture. It is simple to argue that without *considering* beauty the chance of a building having beauty is remote, and there seems to be truth in such argument; but beauty is not subject to reasoned rules, of all things it is most the outcome of digested experience permeated by the other attributes of architecture. In searching for the use of the aesthetic approach by a study of some wholly admirable buildings it appears that it is an attribute which can never have been separate from others. It takes its part in the perfection of each.

Of recent years the late Professor Lethaby has emphasized that architectural beauty grows from the fitness of a building for its purpose, and from its structural significance, and not from things done 'for looks.' Yet the simplest things he designed were delightful to see and thus did more than fulfil these other requirements. For instance, the fanlight above the door of his house satisfies such demands, but it is also beautiful in relationship to its place and functions. This beauty is added

out of man's natural instinct to take pleasure in what he makes or designs. It is not the result of a reasoned theory of beauty or of good looks. It is the outcome of much deeper forces. It would be useless to ask a designer of such a fanlight to give a reason for the curves possessed by the iron bars. And in the same way the 'aesthetics' of architecture cannot be explained. Indeed, it appears that to shape a building in accord with some aesthetic theory of design is greatly to lessen the chance of its being wholly admirable. It is a word-contradiction, though not a contradiction in fact, that to stress the aesthetic approach to architecture is as ill a thing to do as to stress any other of its attributes. It is possible that because it is so often stressed, or over-reasoned, and oversought to-day, that so much of our architecture is so little admirable. The exceptional beauty of the Greek temples, built at the highest point of the Greek civilization, may well be the result of an instinct in man to develop to its greatest extent, not only the functional attributes of these buildings, but also the organic beauty that was seen to reside in them. It seems that the beauty they possess had this origin, rather than being a thing created of man's mind and then applied. Beauty is potential in all things ; it may

be that it is for man to draw it forth rather than to calculate how he can provide it.

Before I give my conclusions I would like to illustrate them by examples, but in doing so I am very conscious that I place myself in the dock equally with the authors of the buildings I am about to examine. To make as sure as possible that the jury is prejudiced in my favour, I will take as examples buildings which are already the butt of architectural critics. The Tower Bridge in London is bad architecture. It offends in every respect. In it are stressed a number of architectural theories, and in it what was normal in the building of the day is avoided. The designer, as it were, has determined to revert to the standards of a narrower plane. He saw that they contained all possible virtues in their day, and concluded that being once good, the goodness must be right in any wider plane of my symbolic cone. He failed also to appreciate the propriety of proportional economy ; he overreached the influence of cultural experience ; and he was 'style mad.' He was obsessed with an idea that the normal must be bad, and the idea of honesty must have been much in his head or he could not have lied so preposterously. His only virtue perhaps was

that he did not, admiring the use of local material, throw Thames mud at his towers when they were complete.

I turn to my second example. There has lately been a great deal of talk about petrol pumps and the stations where they stand. People have rightly grown abusive over the indifference of their builders to neighbourly decency and tidiness, and the ignorant have told the authors of these works to look at ancient examples of building and learn from them the likeness they should have, almost always ending their pathetic appeals with baneful references to machine-made and local materials. Some enterprizing proprietor of such a station has lately seized the opportunity to please his clients ; and in doing so no doubt quite genuinely believed that he was helping architecture to take a sturdy step in the right direction. He built his station in the Tudor style, at least the front of his building was of that kind, and gave to it an 'old world' thatched roof. This station has received general approval in papers that ignorantly hope to serve the England's Beauty Movement. Let us apply the theories I have propounded to this case, and attempt to judge it by the standards suggested or expressed above.

There is no reason, given that the sensible treatment of its parts is provided, why sixteenth century timbers in an existing building should not serve to support an old roof, while the latter provides shelter for an ordinary need of the twentieth century. For reasons that are economic alone such adaptation is sensible, and to those reasons can justly be added others associated with the present cultural interest in the works of our ancestors. But to frame a new building in the old manner for a purpose very alien to those which existed when that manner developed, is to stress beyond its proper value a prevailing cultural outlook; namely, our interest in ancient arts and bygone craftsmanship is in this way too much emphasized. To lay so heavy a stress on the picturesque and on the love of antique forms is as grotesque as it would be for a cook, who, knowing the virtue that resides in beans, puts beans into every dish, from the *hors-d'œuvre* to the savoury. In the public mind the abstract petrol station has the qualities of cleanliness, smartness, bright colour, convenience, and about it there should be a suggestion that no time can be wasted there. It occupies, too, a very definite place in the commercial economy of the nation, and it is not, as is

a country house or a church, associated with permanence, or with the display of skilful elaboration. For these reasons a newly-built petrol station, where carefully wrought oak timbers and the skill of an old-time thatcher are paraded, is bad architecture. And there is another reason why this treatment is out of place and false. The greater relative cost of these materials and their preparation tempts the builder to mass them together in the front and to use for the back and sides of the building the least costly materials that can be provided by the factories. Where the economic scale of a building is in this way changed in its own different parts, the observer feels not so much that an attempt has been made to impose upon him, as that the building has been wronged by the use of a base contrivance. Such buildings are like a man who pretends a bravery he has not got.

In the wholly admirable buildings of the world the economic scale is held evenly throughout them. This is so because in them there is no attempt to deceive anyone as to the wealth at the disposal of the builders, be that wealth substantial or cultural.

The very word petrol, too, is closely associated in our minds with risks from fire ; therefore from instinct, if not from real practical reason, readily

inflammable materials are out of place in a building where petrol is stored or sold. In the case of this much advertised and well-thatched petrol station, the origin of its bad architecture is an over-emphasis on the idea behind the jargon catch-phrase of our day, 'Save the countryside.' It is good to save existing beauty, but it is better to be sane in its use; for from such sanity was the old created beauty born, and by such sanity will beauty be continued.

Enough has been written here from which to base a conclusion. The chief origin of bad architecture is the consciously laid stress on one or more attributes of architecture which in one or other generation have been theoretically asserted to be essential to the art. A theory has caught the minds of men and has been accepted beyond its merit and other attributes have consequently been neglected—attributes that should have been given proportionate place.

It would almost seem that bad architecture is the result of a too conscious search for the reverse—that is—for good architecture; instead of thinking of the building as a unit it is thought of as something to which architectural design may be applied; and the art of architecture has suffered from a

reason-directed search for virtue. Man has strained himself beyond his powers ; and the art can only recover its glory when it is not so precociously considered. This is a difficult saying, and it is one that is more than difficult to act on. In time past man did not require to prove the virtue of what he built ; the sense for fitness in this art was common and unquestioned. In a word, man relied on common sense, which is the common denominator of the senses.

Bad architecture, then, has its origin in a virtuous attempt to give a building perfection, an attempt that is supported by word-reasoned theory. Of necessity some factors essential to perfection are omitted in the formation of such theories, or they are given too small a value, while other factors are over-stressed and exaggerated. For it is as difficult, through the conscious use of the power in the brain, to know the proper relationship of the attributes of architecture, as it is to calculate the forms to be taken by a wave breaking on the shore. Perfect building, and this includes good architecture, appears to derive from a deeply driven and very largely subconscious endeavour to find and reveal the beauty that sleeps potential in the normal being of a structure, a beauty that first takes form

in the minds of men, and that later through his physical energy grows to firm shape out of the bones and flesh of the earth's surface.

In the terms of my simile, bad architecture does not evenly fill its proper plane in the light-cone of developing human virtue.

## JOHN RENNIE, F.R.S. THE DESIGNER OF WATERLOO BRIDGE

JOHN RENNIE was the ninth child and youngest son of a farmer of Preston Kirk, East Lothian. He had three brothers. He was born in the same year as Napoleon and Wellington. When he was five years old, in 1766, his father died. His education, begun at the village school of Phantassie, was continued at Dunbar, and it appears that he was also at the University of Edinburgh. The authors I have consulted seem anxious to note early signs of greatness in the development of their hero. It is claimed on one hand that he never missed school, being keen to learn, and on the other that it was not uncommon for him to spend whole days in the workshop of Mr Andrew Meikle instead of with his schoolmaster. It is clear, however, that at a very early age the boy's mind was excited and stimulated by any kind of mechanical or constructive engineering. There is proof that he early showed great ability in all subjects connected with mathematics. After a

visit to Dunbar School in 1779, a Government inspector wrote as follows in his report :

I must notice in a particular manner the singular proficiency of a young man of the name of Rennie, early intended to be a millwright. . . . He had attended Mr Gibson for mathematics, not much more than six months, but on his examination, he discovered such amazing powers of genius that one would have argued him a second Newton.

The inspector goes on to tell that young Rennie answered all the questions that were asked him, giving sound reasons, clearly stated, without hesitation, in support of his replies. In his son's, Sir John Rennie's, manuscript, we are told that his father as a boy

seldom or never joined in sports or amusements, but kept himself entirely secluded from them, and complained of their noisy interruption and interference with his favourite pursuits.

From these accounts of him we get an idea of a boy living at his brother's house, a little neglected perhaps, keenly attracted by what went forward in the workshops of 'the famous Mr Meikle,' gaining his attention and affection by keen enthusiasm and by fearless and intelligent questions. It may be that, had Rennie's father lived, the boy

might not have had the opportunity to develop his powers so fully under the strict discipline of a Scottish home. As it was, the mind of John Rennie absorbed without difficulty or compulsion all he saw and heard.

At the end of his school career Mr Gibson, the mathematical master, left, and Rennie took his place for a few weeks. He was pressed to accept the post, but, knowing his own powers and desiring an active life, he declined to do more than take charge until a permanent appointment was made. In 1784, after having served under James Watt for a while, he took employment in the firm of Boulton & Watt, mechanical engineers, of London. The period spent in working for James Watt proved most useful to him in after years, for it was from him that he learned all that was known of steam engines. The first work which he did for his new masters was to design and supervise the making and erection of the machinery of the Albion Flour Mills at Blackfriars. These machines were considered in advance of anything of the kind that had been done until then. It is seen from this that Rennie was among the first to develop the powers of steam to the use of man.

He was a friend of Smeaton and learned from

him the art of directing hydraulic constructions. During his life he made himself familiar with the great constructive works of Europe, both ancient and modern.

In 1791 John Rennie set up for himself as a mechanical engineer. He was immediately occupied in advising on and undertaking the construction of canals ; later he became famous for his knowledge and skill in building docks, breakwaters, and bridges. His works show that he was also an artist. Waterloo Bridge alone is sufficient proof of this ; but an examination of his drawings shows that besides designing beautifully in masonry he relied on his sense of proportion and his original commonsense mind when he came to use cast-iron for lamp standards, parapet railings, or heavy structural members. I do not know whether he played well, but he certainly seems to have enjoyed making music on the German flute, the violin, and the bagpipes.

There is a fine portrait by Raeburn of Rennie late in life at the rooms of the Royal Institution of Civil Engineers. He was a tall man, being six feet four. His features were good. He had a finely modelled mouth with lips that closed firmly, a determined jaw, a nose well-shaped and

commanding. His forehead as shown by Raeburn was clear and well-proportioned. His head was in scale with his body. His eyes were blue and deeply set, his profile distinctly handsome. His biographers describe him as courteous and kindly, being always willing to give his advice and to place his experience at the disposal of the younger members of his profession.

The first bridge which Rennie designed in 1784 'was at Steventon's Mill in the county of Mid-calder.' He was responsible for the Crinan, Rochdale, Lancaster, and for the Kent and Avon Canals. He undertook the making of the new cut for the River Witham at Eaubrink in the low-land of the Norfolk levels, where the sandy subsoil is treacherous and difficult. The great breakwater at Plymouth was in his charge. Among the bridges he built were Kelso Bridge, 1801 (the prototype of Waterloo Bridge), London Bridge, and Southwark Bridge. It was for the last that he used cast-iron and made the centre span with two hundred and forty feet, a width much greater than any other arch over the River Thames until the Tower Bridge was made. No arch of the present bridge at Southwark has so great a width of waterway. He designed a stone bridge for

Vauxhall, and drove the piles and laid the foundations for it. John Rennie designed and sent to India a wide cast-iron arch for a bridge at Lucknow.

Rennie invented and used for the first time a steam-driven dredger with a string of buckets on a continuous chain. This was in making the Hull Docks in 1803. He also made roads of broken stone before Macadam gained a reputation for inventing this system.

The full manuscript by his son contains a minute description of the building of Waterloo Bridge. I have chosen sentences from this manuscript to quote:

As the Act of Parliament had specified that the clear lineal waterway of the bridge should not be less than 1080 feet and that there should only be two centres up at one time in order not to obstruct the navigation, and the shores of the river are unequal, the Strand being higher than the Lambeth shore it was almost indispensable that the top of the bridge should be level, for had it been made to rise in the middle, there would have been a most awkward hill to rise to the Strand, and it would have been quite out-of-keeping with Somerset House.

The last sentence is worth noting. It shows that the directors of the Bridge Company with their engineer did not alone think it their duty to make the Company a profitable concern, but considered

the beauty of the river and the effect of their work on that of their predecessors.

In the *Evening Star* for 12th October 1811 there is a brief account of the laying of the foundation-stone of this bridge. It was placed in the coffer-dam on the Surrey shore, and the directors and their engineers laid their hands on the stone, when the chairman addressed them 'in a neat and appropriate speech.' It was said :

This bridge, when completed, will be the largest on the Thames, perhaps in the world, and is to consist of nine arches all of equal size, each with 120 feet span, and of a beautiful elliptical form which will prove a great ornament to this metropolis. Its utility will also be very great.

The bridge was opened with great ceremony and state by H.R.H. The Prince Regent, afterwards George the Fourth, attended by the Duke of Wellington and his Court, on the 18th of June 1817, in commemoration of the anniversary of the Battle of Waterloo, from whence the bridge took its name by Act of Parliament as a memorial of the triumphant success of the British army under Wellington over the great conqueror Napoleon the First, which led to his dethronement and downfall, and to the delivery of Europe, indeed of the whole civilized world, from his thraldom. . . .

At the opening The Prince Regent offered to confer the honour of knighthood upon Mr Rennie, which he respectfully declined.

I have not been able to trace evidence for the story that the tall engineer stood at the north end of the bridge to receive the Royal party who were to ride from the Surrey shore. When he saw them walking over the bridge instead of on horseback he felt his work had been slighted, and at that moment was in no mood to receive honours.

At the time of his death Rennie was busied on furnishing a new construction at the East and West India Docks equally ingenious for its architecture as for its mechanism—there was a vast roof, supported by lofty columns of cast iron, and present in the middle of the structure were aerial roads on which are made to run carriages, whose mechanism is so contrived, that by their means enormous mahogany trees may be raised and let down at pleasure.

I like this description of a travelling crane. It seems that Rennie was responsible for the invention of, or at least a great improvement in, these now common aids to man.

John Rennie died on the 4th of October 1821, in his house in Stamford Street. His family wished his funeral to be 'in the nature of a private one,' and 'lest the passage of the funeral cavalcade over Waterloo Bridge should give somewhat of a triumphal character even to the scenery of death,'

the procession moved slowly 'over Blackfriars Bridge and up Ludgate Street and to the principal entrance of the Cathedral.' So many people crowded to mourn the death of the great engineer at his funeral service that it was only with difficulty that the coffin was carried into the cathedral. For John Rennie was buried in the place 'of the illustrious dead—of the men whose works contributed to the greatness of the nation, or advanced the civilization of the age.' He lies near Sir Christopher Wren in the cathedral of St Paul, in the heart of the city he had so much beautified.

Mr Rennie had no rival. Every part of the United Kingdom possesses monuments to his glory and they are as stupendous as they are useful. They will present to our children's children objects of admiration for their grandeur and of gratitude for their utility.

Let us see to it that Waterloo Bridge remains long among the number of these.<sup>1</sup>

<sup>1</sup> This was written in July 1926. Within the next ten years the author was to fight to this end and to fight in a battle which was lost.

## UPON THE MAKING OF AN ARCHITECT

THE perusal of Mr J. R. Yerbury's interesting little book *The Architectural Student's Handbook* turned my mind to the consideration of what is essential in the early training of an architect. It is a theme on which much might be said, though I shall be unable, in the space allotted me, to do more than state a few ideas very briefly.

The educational systems employed for this work have differed very considerably through successive centuries. In the Middle Ages the architect was a master of one of the building trades who reached his position as director of works by means of the knowledge he gained in the labour and actual handling of the materials then in use. He knew both the places of their origin, and the cost of their preparation and transport. He served his apprenticeship as a workman. When during the Renaissance classic forms were revived with the renewed interest in classic literature, when, in fact, the design of a building became dependent on a learning which was within the reach of only a

few, the architect's training led him to leave the construction of his building in the hands of men reared under the old system while he directed his attention to its form. His knowledge was the knowledge of the few. He mastered the situation not in the interests of the work of all the tradesmen who together built the house, but in the interests of an alien and extraneous cult. Any person aspiring to the position of architect had either to learn the new rules direct from the writings and works of the old authorities or to apprentice himself to one who had done so, and, with knowledge thus acquired, force on the native master tradesmen forms which were unnatural to their traditional practice and inconvenient to their accustomed methods of construction. Every step that was taken to separate the designer from the builder was a step leading towards less wholly good results. Under this system the master tradesmen lost confidence in themselves as designers, became accustomed to hide the important lines of their construction, and, when left to themselves, attempted to apply forms which they did not understand. They forgot the essentials of the building art and in its place learned to display the affectations of their age. Ordered building became

possible only when under the control of an architect capable of making very descriptive specifications and detailed drawings. As time went on this system became general. Comparatively few architects could afford to study the original sources of the learning of their profession, and the old system of apprenticeship was applied to their newly specialized training. Thus the art of making fine buildings, which is a single art, became divided between the architect and the builder, between the designer working on two-dimension sheets of paper in offices away from the actual works and a contractor who was discouraged from considering the result of his labour, and who, if he took any interest other than that of the profits to be made from carrying out his instructions, was only able to enjoy the sense that the foundations were well laid and the various materials properly assembled and joined together. But while this state of things was continuing, the man who wished to learn how to direct building operations—the young architect—was to some extent able to get in touch with buildings in the making. In the office where he was apprenticed he had opportunities of seeing the drawings he had helped to make and the specifications he had copied used by the builder as

his guide in making the buildings. He could not learn the nature of materials as well as he would have done had he handled them himself, yet he had chances given him of realizing how his plane drawings became in actual practice the three-dimension building. In some offices the system of apprentices was abused. The master, instead of teaching, or even letting his pupils learn, used them to save himself the expense of employing draughtsmen. The pupil was bound to his board and seldom saw the buildings. This estrangement of designer from the work he designed which began when he first began to learn his business has resulted in many of the affectations we now see. The 'scene painted' building is the outcome.

During the last twenty or thirty years an attempt has been made to remedy one of the evils of this system, an evil which was less harmful, as far as the resulting architecture was concerned, than the one this new system is accentuating. In order to make it impossible for an unscrupulous man to use his pupils as drudges, schools of architecture have arisen where the young man learns his work in the abstract. The drawings he makes are not made for the guidance of those who build. His

designs are not limited by actual conditions. Struggle as he may even under the guidance of excellent instructors, his immediate interest must lie in the two-dimension sheet of paper before him. To think in three dimensions he must draw for himself perspectives, and in drawing these it is difficult for him to think of his building with its contents, its ribs, and muscles as a whole. It becomes for him an arrangement of plain surfaces to which he applies the current talk of 'proportion' of 'textures' and of 'colour.' I suppose that each system develops some one faculty or group of faculties with greater nicety than any of the others, and the resulting works have some merits that in other ages are not so fully realized. But as each merit is only perfect when it is right in relation to the whole, any system that leads to the development of one of the qualities that make for good architecture even to the partial neglect of the others is a system that should be regarded shyly. The training in the architectural schools as they are now organized seems to me excellent so long as it forms a part of the general education of the pupil. But when that stage in his life is past I feel it should not be prolonged lest the young architect acquire a habit of thinking

academically and without proper regard for, or knowledge of, the realities of life.

I imagine the best training that could be devised would be in a school where actual building was done. There the students would have opportunity of making drawings for their own guidance in carrying it out. They would learn to think in terms of the finished work and would not spend time in acquiring the arts which are allied to production of plans and elevations, but which, when they are accentuated, distract attention from the real end. Such a system no doubt existed in the Middle Ages—it grew up naturally and was not a scheme artificially devised. It seems to me that if architects are to be made capable of raising the art of building to the state of perfection it held in the days of Ictinus or Villars de Hinnecourt, it should be our aim to arrange for architectural training on some such lines. The student can do much for himself in this way. He can pass from school to office and from office to the workshop and building, doing something the while to earn his own living. This is not a fancy scheme. If he has some guidance it is within the reach of every student to learn his profession in this way.

*The Architectural Student's Handbook*,<sup>1</sup> referred to above, was written by the Secretary of the Architectural Association, and published in 1923. It describes the modern system of learning the profession, going so far as to recommend that the first five years of training should be spent in study at one of the recognized schools. It is a book which those who mean to practise architecture should read. But I should advise them when they do so to remember something of the history of architectural education, having in mind the system prevailing during the finest periods of architecture. I do not suggest that education is responsible for all the faults we find in the worst works of the present day, nor yet that through its influence alone the best was produced. Other circumstances joined with it were greater or equal causes of these achievements.

The opening sentence of this book: 'Architecture is certainly one of the most fascinating of the professions,' strikes one as a poor tribute to a most serious work of life. 'Fascinating' seems to reduce the practice of architecture to the level of a parlour game. But from what follows this meaning is clearly not that which the writer intends to convey, nor would I mention it except

<sup>1</sup> Published by the Technical Journals, Ltd., at 10s. 6d.

to advise the reader not to lay the book aside because of it. The system he advocates here lays constant stress on drawing, it almost seems as though that art were the first and most important object of the student. Yet the drawings from which the great cathedrals were built were poor beside those that almost every student can make. They were sufficient to explain the intentions of the designer to those who knew how these buildings were made. Drawing will help a student to understand building, and when he has enough knowledge to think one out for himself, it is a means of conveying his thought to others. Beyond this, that art is worthy of study for itself, but not as the servant of the architect. To stress it during the training of an architect is to distract him from the main issue of his study. Among other useful chapters are those which give advice as to the instruments needed, the books to be studied, the architectural schools of England, hints as to how to study in Rome and Paris, and some indications of how to, and how not to, set up in practice.

## IN PRAISE OF LIMEWASH

THE practice of using limewash on buildings for their protection and decoration is as old as the history of man. It is only comparatively recently and in this country that it has been neglected ; the present tendency, therefore, to revive its use is a very welcome one. The repair of a mediaeval building is more than usually difficult where the surface decay of masonry is active. The treatment of one of the most important of the great English churches with a coat of lime is likely to excite considerable discussion in the near future. In the case referred to a durable stone is being built in to replace some which was rapidly decomposing. This is a work which tends to make the whole look patchy and disagreeable. Partly, then, to give the mass an harmonious unity and partly to prolong the life of the remaining old stone, the whole outside is being limewashed. The result as seen on the surface already done is brilliant ; the building may be said to glow with renewed health ; the contour of each moulding again tells its true value. Against the blue sky the worked buttresses and pinnacles have a magic beauty.

The archaeologist knows that traces of limewash are found on almost every mediaeval building of this country. But only in the lesser houses and farmsteads is the practice continued in unbroken tradition from the old days. In those parts of Devon and in villages of Cambridgeshire and Essex and wherever the traveller finds this custom continuing he accepts with pleasure the resulting charm. Umber, ochre, Venetian red, and also the white of pure lime give to these buildings individuality and express the pride and delight the people take in their homes. In fact, limewash as a protection to the surface has been too long neglected. It is a hopeful sign to-day that the sanity of the methods of the past is again being recognized. Such a result of study is far more likely to lead to the development of fine architecture than the monotonous reproduction of ancient forms.

Examples of this treatment on new buildings of the lesser sort are not uncommon in London. In Flood Street, Chelsea, there are two, each of very considerable merit. On the excellent brickwork of both of these buildings limewash has been applied with marked success. N. or M. is the architect who designed these.

## SURFACE TREATMENT OF OLD CHURCHES

IN England when churches are mentioned, it is always of old buildings that we first think ; yet because a knowledge of archaeology demands more an acquaintance with decorative features than with the walls which carry them, the quality of these walls is little appreciated by the amateur. There are not very many old brick or timber-built churches in this country, and therefore in these notes only those of stone will be considered.

### STRUCTURAL METHODS AND CRACKING

Of stone walls there are many kinds. In buildings that were rich and expensive the outer, and sometimes the inner, surfaces were of squared stone chiselled to an even surface. Such work is known as 'ashlar.' The least costly stone walling is built of irregular pieces of relatively small size which are either not shaped at all, or which are only roughly chipped to present with the rest a face that is fair and even. Such walling is called 'rubble.'

The walls of the humbler parish churches are of this kind whether the stone used is flint, oolite, grit, or ironstone, and except in the poorest parishes the angles whether of wall, buttress, window, or door are finished with larger blocks of smoothly worked and often moulded stone. For the last hundred years or so, and for ought I know to the contrary for centuries before, these well-worked angles have been called 'dressings.'

Between the very humble buildings such as the thirteenth-century tower of King's Nympton in Devon where they use no 'dressings,' and the rich walling of cathedrals such as Salisbury, where there is no rubble walling, and where all is ashlar, an infinite number of different ways of building exist. The walling most usually found in parish churches is of rubble with stone dressings.

All mediaeval stonework is laid in lime mortar, a material that sets slowly and which varies much in strength when fully set. The attributes of mediaeval mortar, and the needed resistance to rain, dictated the thickness of the walls then customarily used. The walls of those days were built in three parts and rose course by course. The inner and outer stones were first laid and the space between was filled with smaller and rougher stones packed



AT A TWELFTH-CENTURY TOWER IN GERMANY



into masses of mortar. Lime mortar tends to shrink in setting, and it will be recognized by all that unless this shrinkage is even throughout a wall, the stresses and strains in it vary and are likely to be followed by fracture between part and part. Thus in a thick wall where the sizes of the stones used for the inner and outer faces are different and again where those used in the core of a wall differ still more, and particularly where the quantity of mortar used in the different parts is not the same, fractures almost inevitably occurred between kind and kind.

It is common to find such fractures between a tower staircase and the mass of a tower wall, particularly where the mass is rubble built throughout, and the steps, as spiral stone stairs always are, are of worked ashlar with fine joints. Again in walls where the core is of markedly different nature from the faces, it is not uncommon to find that the three parts of a wall have been parted by slight or marked fractures. Knowledge of the nature of walls is important in considering their surface repair; and it is easy to understand that the results may be serious when to such uneven conditions in the wall itself, external stresses are added from the thrusts of unbalanced roofs or from movement in

the foundations, or from the penetration of rain, particularly where this last is accelerated by the growth of ivy nourished by roots in the walls.

This is not a treatise on structural repair, and no more will be written here of the nature of the internal structure of walls ; what has been written was set down so that those who are concerned for the treatment of wall surfaces may not think of them apart from the whole of which they are but a part.

One further matter well recognized by all, yet one that is not commonly put into words, should be stated before any comment on the old and more recent ways of dealing with wall surfaces are discussed.

#### BEAUTY COMES BY THE WAY

Perfection in architecture rests neither in rich work nor in mere homely. It is present wherever the men building have rightly counted the cost and have properly completed the work they undertook in one economic scale, at the same time taking pleasure in a 'finish' that is appropriate. Thus the tower of King's Nympton, lately so foolishly stripped of its contemporary oaken spire, is as

perfect as the north porch of Salisbury Cathedral. Each is complete in the economic scale possible to the builders. Both deserve an equal care. The nineteenth-century archaeologists, excited by the study of architectural features, do not seem to have remembered this fact. Their minds always turned to an interest in the costly workmanship of free-stone masons, and away from the good building of the humbler folk who made such fair walls of poorer material. To them an early wall was of little value, any modern one was as good—better perhaps by reason of the less difficult materials of which it was built. They seem to have regarded perfection as a thing related to some abstract ideal of their own imagining, and not to the real conditions of those who built in old days.

In another sphere of life the same outlook would have made them regard the speed of an aeroplane as more perfect than that of a swallow or a child. And in considering this aspect of the matter further one must remember that beauty is a natural attribute of this perfection, and is not a thing that can be added to it by some separate thought or act. It is as much a part of the flight of a bird or of a good act, as of a wall built well within limits set

by nature. Man in his vanity at one time declares a mediaeval window barbarous and ugly, and at another decries the aesthetic value of those made by Wren's contemporaries. In one generation he allows beauty to belong to a fashionable style and presently his grandchildren will have none of it. If in this difficult matter any guiding rule ever appears it may be that beauty, like happiness, is most present when she is not separately sought. Almost it would seem that to woo her is to insult her; certainly to subject her to theoretical rules is seriously to estrange her.

#### PRACTICAL TREATMENT OF WALL SURFACES

With this in mind not as an ascertained fact, but as a possible way of approach, we may well consider the practical treatment of the wall surfaces of old parish churches. We all desire to preserve those matter-of-fact qualities which being good in their scale, were once perfect, and therefore also beautiful; and which being so, by a mystery perpetually give to those who use them and to those who may chance but once to see them, a happiness in life.

The builders of these church walls loved a true

and even surface. It showed their skill, it resisted the attacks of time. The degree of evenness was ordered by the amount of time their means allowed them properly to spend in working them, and on little else. In our day 'artists' talk about surface textures, and the men who lay on the mortar value their skill in the neat finish of a joint. Neither the one nor the other seem to recognize that by stressing one attribute of goodness beyond its natural quantity they hamper the making of a perfect whole, which whole is a unit impossible of division into parts defined by words. Mankind is agreed that a surface-conscious building, whether it is the work of a bricklayer or an 'artist,' is in some way disagreeable.

In treating the surface of an old building, current knowledge and practice inevitably plays a principal part, but unlike the treatment of the surfaces of a newly built wall an additional factor automatically demands attention, namely, our accepted respect for the things and ways of our long dead forefathers. Technically our problem is different from theirs, and no attempt should be made totally to obscure this technical difference, that is, if the verbal interpretation of perfection and beauty suggested above at all coincides with reality; for if

this interpretation is disregarded, affectation and not good sense will force its appearance.

### TREATMENT OF RUBBLE

When our ancestors built rubble walls they filled the surface joints fully flush. The nature of the walling where it has remained unaltered is revealed to us by slight irregularities in a few half-disclosed stones, and not from the emphasized outline of every stone. The prominent parts of some none too truly laid stones peep through the surface mortar. When the walling mason had finished, the hair cracks, which sometimes appear when largish masses of mortar set, were closed down by a unifying coat of limewash ; and this was laid on without any fussy respect for toolmarks, which marks, it must be remembered, were not the result of aesthetic principles, but an accidental means to an end—the whole building. But the origin and purpose of the marks left by ancient tools does not concern us here.

Our immediate purpose is to consider the proper treatment of the surfaces of rubble-built walls. Their original finish has been described and our business is to discuss what to do when the finished

fullness of the mortar is so perished and fallen as to leave the joints between stone and stone open and a danger to their security in the wall. I referred to a difference in the technical methods to be adopted in the repair of these surfaces from that employed in their making. This difference resides in the fact that when the work was finishing the walls were 'green' and the mortar in which the stones were laid was of the same kind as that used in their covering. The two were one as far as unity of material was concerned. In the repair of an old wall the case is different, for the old mortar is dry and new lime mortar may but feebly set on to it. We have therefore to be careful both to prepare the surface of the old, and the mortar to be applied to it, so that they will set together as a single unit.

#### STUDY THE ANCIENT WORK

It would be unwise for any man to decree that it is always best to remake such a surface as was originally there. Although the knowledge of the first builder's intention must certainly be a weighty factor among those who dictate a decision. Probably where the whole of an old surface in a rubble wall needs protective pointing, it is best to accept

the old way as the one to be aimed at, covering every part with mortar but the quoins and such other stones which were laid flush with them. In doing such work it must be remembered that mortar will not set to stone unless it is clean as new. However, where a wall surface needs patching only, probably a less full surface is good. And in making decision it is wise to pay no heed at all to derogatory words of prejudiced critics. They speak of 'smearing' on the mortar, of 'botching,' and so on. If these critics use such words let them be accepted as the name of the method being employed. It makes no difference to the work whether it is called 'mediaeval pointing,' 'plaster,' or 'smear,' so long as it is thoughtfully and carefully done as the best sum of the factors whence it should grow. To call Norman carving crude and unskilled is true, but in no way reduces its merit or worth.

In these sentences attention has been given to the weather and structural protection of the material wall itself. The protection of old surfacing itself must not be neglected, for it is becoming rare. Often beneath the eaves of a rubble-walled church the old surface remains. It should never be hacked away although defective, unless the wall is suffering

for want of its renewal. Examples of original surfacing may be seen in the London neighbourhood. The surface of the Norman tower of Fingest Church in Buckinghamshire has never been altered since it was built except for the insertion of a Gothic window in the west wall ; and there the junction of the then new mortar and the old surface is clearly visible. The tower of Harpenden Church, probably built in the second half of the fifteenth century, and now much ivy clad, also retains its original mortar surface laid on flush with the large well-squared quoins of clunch stone. Such examples are well worth studying if the guardian of a building wishes to know the mediaeval practice before he orders work to be put in hand. It is, too, very useful that the walling mason to be employed should accompany him in such an inspection.

Ashlar stone facing was laid with fair flush joints in old days, and comparable with it is the facing of finely knapped and squared flints which are sometimes to be seen in the Norfolk and Suffolk churches. Very often the whole face of stone ashlar was washed over with limewash on completion.

In the treatment of ashlar or half ashlar surfaces which have begun to decay, two considerations are

of importance. The first is whether the decay has affected the stability of the wall or is likely soon to do so, and the second is whether the repair of the decayed surfaces would materially help to check its progress over parts not yet seriously affected. Very often repairs have been prematurely undertaken out of a desire to renew a lost surface or a decaying moulding. In dealing with old buildings it is good to pay great respect to a general rule that nothing should be done until the life of the wall or of people using the building is in danger. In a wall more than two feet thick an inch or two of surface decay can hardly be considered a structural defect, for it is probable that the whole wall if built to-day would not have been more than eighteen inches thick, or probably less.

#### PATCHING GOOD ENOUGH

In considering the proper face to give a new stone which has to be inserted into an old ashlar wall, it is well to examine the surfaces of the old which remain unharmed from the original builders' touch. A great variety of surfacing was employed dependent on the current technique of the district and on the nature of the stone used. The writer of

this article has noticed that in the less rich buildings a wise policy of economy in labour was observed. He has seen some window jambs, tracery and mullions of the fifteenth century worked smooth with the drag or by rubbing while the quoins of buttresses and walls were chiselled to an even, but not a smooth face. In fact, the mason at work on the stone did not waste his time in lowering its general face to the small pits left in it by the quarryman's tools or by his mate's preliminary blows. The phrase 'good enough' seems properly to belong to such work, and even it may be said that a more exact surface would have been produced only by a waste of time and energy. To some, such words may appear derogatory, but it is easy to justify the process; let us call such work *economically fitting* and all appears well.

To-day man too often seems ruled by such phrases as 'good enough,' forgetting that they are no more than apt or inept descriptions of a reality which is seen in material form or in vision. The least learned of men are the least bewildered by phrases: they think in things and not in words. This digression is more related to our subject than is at first apparent, for how easily may a book-learned master of one aspect of our subject, by his

glib decrying frighten the innocent from adopting some very sensible practice.

In the surface of a new stone in an old wall, then, we must neither be carried away by an 'artist's' theories on the subject of tooling, nor by a skilled mason's pleasure in his modern tradition of marvelously true workmanship. Either may well give a most inappropriate result. If a new stone is to be put among others which were not very finely worked, or which by the action of time have lost the fine finish they once had, it should be worked in a slightly less fine key than those about it. A higher finish will destroy our pleasure in the old surface; and the plea that it will weather by time is only very little true; for given a stone as durable as those which retain to our day the marks laid on them in their preparation, how can a man be deceived into believing that a different sort of surfacing will in a less time, and merely at the will of sun and rain, change to the likeness of the older work? Alone, decay can bring all to harmony, and that state, if we love the building being treated, is no more desirable than is the abuse of life. For to what other purpose than to hinder decay have the works of repair been put in hand?

## TECHNICAL DIFFICULTIES

It is well then to patch a worn surface and to patch so well that a like pleasure may be had from the 'darn' as was had from the newly knit stuff. We are displeased if the darning is too lazy or too careless to take trouble in the selection of his material and in the way it is threaded in. In the repair of masonry a like care is fitting. The only other qualifications being a proper regard for cost and a care for a reasonable durability.

To these general remarks it may be proper to add a word or two about the technical difficulties to be overcome in such surface repairs. The mortar to be used in pointing, because it is laid on a material with a sponge-like power to absorb the moisture necessary to its setting, should be such as will set before this moisture can be dried out of it. We have to-day a material that will help us to form such a mortar, but it is one which has disadvantages of its own, disadvantages which need to be humoured. Portland cement is useful for this purpose, but if it is used in too high a proportion to the sand it will set in a way so unkind to the old life of the building as to cause offence. Its colour, too, is different from that of any material

used in old days, and will for this reason be as disagreeable as would be a patch of blue wool in a green stocking. Yet we can make use of its merits without being inconvenienced by its disadvantages by using a proper mixture of cement and lime and sand. It is also an offence to any but a man who is more proud of the patch than of the wall to be patched, if the texture of the new stuff is very different from the texture of the old in its weathered condition. Care, therefore, should be taken not to permit a technical excellence that is at variance with this. Thus, although examples of cut and ribbon pointing are to be found here and there in old work, these kinds of finish should not be given to new pointing if we are to enjoy the whole wall more than the workman's skill.

#### ‘GOOD ENOUGH—WHOLLY GOOD’

In the renewal of stone, too, it is well to be shy of those who would have us do more than is ‘good enough.’ Just as the over-emphasis of the art of ‘pointing’ is unpleasant, so also is a parade of mason's skill, when it is newly apparent on the face of an old wall. This sort of goodness by its excess becomes vexatious as a conscious parade of

any of the human virtues is disagreeable in men. What is good 'enough' is wholly good; what is more or less is bad. The cost of the work is no guide to its excellence, it is the cost proportioned to the needs that should be sought. And on this matter of the insertion of new stone, it should be remembered that an old wall has settled into a unit; that no inserted stone can so well take its part there as does the one removed. Thus if the bulk of an old stone remains, that remaining bulk serves better in the wall than ever can a new one. It is therefore better, when it can be done, to build a new face on to the old stone, than to withdraw it and fill the space with a new mass.

#### BEWARE THE EXCESSES OF EXPERTS

If in a few words I were to give general advice on the treatment of an old wall surface, it would take the form of warning against the experts in any single attribute possessed by the wall, be these experts archaeologists or masons, be they artists or worshippers of romance, it is safer to trust to a 'jack of all trades' who, although he may master none, has the common sense to master the main issues of our common life. Thus the amateur, if

he claim no expert knowledge, is likely to be an excellent guide in such matters, provided he relies on his own sense, and what he can see for himself in the few unspoiled examples of old wall surface.

There are to-day few old churches but have had their walls subjected to the excesses of experts ; for the Gothic revivalists with hardly any exception turned their theoretical dislike of mortar and plaster surfaces, of limewash and of 'good enough' masonry into the real excesses of an over-stressed virtuosity ; parading their taste to the hurt of the buildings our forefathers made with an innocent, and perhaps even an ignorant pleasure.

## THE PRESERVATION OF ANCIENT BUILDINGS

TOWARDS the end of the eleventh century Niccolo, son of Crescentius, built himself a house at Rome, and on the frieze recorded his admiration of the material magnificence of the ancient city seen then in gaunt decay rather than as it is to-day in excavated ruin. The inscription<sup>1</sup> he caused to be cut showed his desire to recreate the grandeur that in his day still awed the hybrid citizens of Rome.

The house he built with such high purpose reveals no evidence that he wished to reproduce the manner of the imperial City. Its walls of brick and stone betray the gloom he felt at the small strength of his own age. He knew Rome's ordered Rule had left the world; and that no contemporary state could produce a wealth from which to raise on an imperial scale, and in

<sup>1</sup> An extract from the inscription translated reads: 'This lofty house was erected by Niccolo, son of Crescentius, not from motives of ambition, but to revive the ancient glory of Rome.'

marshalled number, buildings asserting pride, power, and control.

The architecture he admired was evidence of a people's pleasure in its own greatness ; and it was in this sense, and not from an aesthetic interest in a style, that he desired to create again the material body of a Rome lasting, brave, and rich. The house he built was decorated with barbaric splendour. Forms used by the Augustian masons may yet be recognized there, but they are blurred by the influence of Byzantium and by the small knowledge of his day. The assured enrichments of Roman architecture were translated by his carvers into an elaboration uncertainly applied.

For our purpose the story told by this inscription is evidence of an early interest in the buildings of antiquity. But this interest shown by this Niccolo is not just that which we have to-day. The ancient buildings of Rome were to him the sign of a rich and organized well-being. To contemplate them was for him to appreciate the greatness of those who built and afterwards used their ample shelter. He was not content to judge proportion, to appraise a moulding, or to consider the merits of opposed materials and the skill shown in their finish. To-day ancient buildings are the study of

experts and the hobby of amateurs ; they are hardly ever a cause inspiring a fuller activity in life. He sought to revive an ordered reality in producing the symbol by which he recognized that reality, and he failed because the signs of life cannot be greater than the life that gives them. His work was the last flickering flame of a dying fire : it remains broken and battered, a half savage attempt at civic magnificence.

It would be tedious to repeat how centuries later, when the order of man's day was again more or less stabilized, Rome, and things Roman, again absorbed attention. First in Italy, later in northern Europe, and finally in England interest in ancient buildings made man aim to romanize the manner of his streets, churches, and homes. Rome typified a splendid order and he thought with the reproduction of that order's sign, to live with the dignity attributed to the classic period of that city. The study of antiquity was the study of the dress of life, and tailor-architects astutely served their client-customers who wished to clothe a foreign race in the togas of an ancient people.

Our interest in old buildings is further different. It is specialized, scientific, precise, and little related to life's full flood. We do not hope by pageantry

to find ourselves true Romans, nor by wearing monkish cowls to re-establish an unquestioned obedience to the Church.

Some aim to preserve the beauty that resides in these old buildings ; from them some seek to increase the knowledge of past ways ; some, conscious of the perfect response these buildings make to the different conditions that bade them grow, feel that such skilled art should be handled with the care demanded of a Chinese vase made long ago ; and others, taught by the repeated words of successive generations, easily accept the creed that where age is, beauty, art, honesty and all other human virtues must reside.

It is hard to explain why it was that the energy in man took the material form it had in these old buildings. Why, for instance, did the arch become pointed in the thirteenth century ? Why, in that century, did leafage in chiselled stone receive shapes unseen before in nature or in imagery, and spread a true species, as poppies do in plough-lands, from Cordes to Trondheim, only soon to disappear, until, in Victoria's reign, the hot-house architects forced their stiff revival under Paxton's big glass roof ? It is possible to trace early origins for each fancy of these builders, and it is not

difficult to trace the history of our interest in antiquity, but to define the causes of our interest is difficult, and it is yet more difficult to prove in a world where we are best occupied with our immediate needs, that it is proper to give time to the enjoyment and preservation of old buildings.

We know, very many of us know with more than a vague knowledge, that these buildings are valuable to us and that we desire their protection and continued being. But the reasons we give in support of this belief are formed to justify our view in the eyes of critics rather than to lead us to conviction. They are explanatory rather than original.

It is, in the end, sufficient to accept as a fact that we like old buildings, and leave the argument about why we do so and whether we are justified to like them for academic debate.

Thus asserting our pleasure in this expression of human energy, it may be well to attempt to find the qualities which old buildings possess and which enable us to name them 'classic' in the sense that great literature is classic whether recent or of great age, whether short or epic. The common attributes of architecture taken separately or together

are insufficient to justify such recognition. Proportion, elaboration, size, material, efficiency, and skill in construction do not of necessity compel our complete admiration.

The indefinable pleasure that we take in noble building can be shown to depend on none of these things. It derives from a unity of purpose and execution that has no name that language properly expresses.

A mediaeval barn, a great cathedral, a country labourer's cottage give an equal thrill when we come on them perfect of their time and of their kind, yet they are very different. The unmoulded beams of farm buildings are of equal beauty with the bossed and delicately wrought vaulting of a cathedral choir. The thatched roof of a cottage is as pleasant as the costly masonry of a richly windowed tower. The skilful use of local materials is no unfailing standard by which merit may be judged; if it were, beauty would not reside in Marshland churches whose stones were hewn from the native rock of Barnack. Form, joined with colour, does not wholly satisfy, else we would find a life-like model of the Abbey made skilfully in plaster, shaped realistically and stained with proper colour, as pleasing as the Royal church at

Westminster. Age gives a value which cannot be added by the thought or skill of man, but our interest does not lie in age alone, or any buried walling left in England by the departing Roman would stimulate our pleasure more than the bridge at Barnard Castle.

The beauty of an old building does not derive from its fitness for our use, yet did we know it to have been unfit when first it took its form, some sense of vanity and of affectation would more than linger there, decreasing our pleasure in it. Elaboration and simplicity are both to be enjoyed, but when neither the one nor the other is related to the purpose of the building, to its pride of place in the human world, a sense of extravagant absurdity or of niggardly meanness would mar our delight in the work. Neither has a building the quality of perfection that we praise if it has form unnatural to the trade tradition of the day that saw it rise. It would be curious, not lovely, to find in England a church built by fifteenth-century masons with the unskilled clumsiness of Norman craftsmen, and we get no other pleasure from a new house that shows no detail unknown to Thorpe or Smithson than entertainment at the learning of the modern architect and at the skilful

make-believe of bricklayers. Such architecture, like a literary exercise in Ciceronian Latin, interests the scholar more in the discussion of what is, or is not, Latin of the period than an appreciation of real native practice.

The earth falls ever through the sky and ever its place in the heaven around us is *perfect*. Its position and even its nature changes, yet never is it other than *perfect* in relation to space and the other changing and moving bodies there. Perfection in building, in architecture which is seemly building, is no more constant than the earth in its long-time headlong rush. This perfection cannot exist except it is the true response to all the forces that press upon the builder. For our convenience and in explanation of such perfect architecture we analyse this force, dividing into parts by naming one verbally created quality here, and there another; whereas in truth unity alone exists and has ever existed. The earth throws up an oak which is single yet we know that warmth and wet, the soil and its ingredients are among the forces which in its many parts spell unity. So it is with architecture. The state of man's knowledge of the builder's science, his power to lift and transport material, and to fashion the forms

that steel or oak shall take, influence a building ; man's wealth or his poverty affect it, his cultural, religious, or racial prejudice or power properly should leave their mark. A building alone is perfect when it is an immediate response to life, and to the ways of living man. These statements can be tested. Whenever architecture that deserves to be named 'classic,' and I use that word not to convey any sense of antiquity, but as it is used of English literature to acclaim accepted excellence, this test will not be found wanting. Whenever we come on a building that is wholly or in part distasteful it will be found that some theoretic quality has been stressed beyond its place. It may be that conscious insistence on structural honesty has harmed the work, or that architectural elaboration has been applied beyond the proper need of the building, or it may yet be that it is marred by a display of learning, or by too proud a use of a mason's skill in stonecraft.

In the very conscious, or even self-conscious, age in which we live such immediate and almost instinctive response to the life about us seems nearly too difficult ; it amounts to the innocence of genius. To-day architecture has become a matter of the classroom where different teachers,

seeking to correct some clear defect, seeing one truth, cling to it. They turn these truths to jargon phrases, and architecture, the unity of building, suffers or is wholly lost. Some sell a 'cure-all' called 'local material,' some 'style,' some 'modernity,' some what they call 'honesty,' some dilate on 'form' and some on colour, others speak of texture as though architecture consisted in roughing the surfaces of bricks, or in rejecting the even skill of a mason taught in a now ancient tradition. 'Tradition' itself is extolled as a Goddess certain to ensure success if only she is assiduously worshipped. Her very priests seek out old ways, long lost from the shops of living master tradesmen. This worshipped Goddess's true name is 'Revival.' This title is avoided now, for there are few who are bold enough to uphold her under this name in the face of the fashionable crowds who, ignoring *daily practice*, seek to gain success in the name of a 'Modernity' that has in it more of theoretic conjecture than of the contemporary.

The writer of this article does not desire to step into the classrooms of architecture and offer another remedy for all the ills that now prevent her even seemly growth. These sentences of criticism are not written to tell architects how they

should build to-day. They are written to be applied as a test by those who wish to judge the value of an existing building, whether being old, or even very old, it continues to reveal to man the perfection that is in it or whether it disturbs the mind through lack of this unifying beauty. It is of the wonder of such perfect building that through changing times, and in conditions very different from its own, the virtue that is in it remains unimpaired and is surrendered to each generation in the same way as radium endlessly delivers an undying energy.

If truth shines through this questioning discourse it will be found that the number of ancient buildings in England which do not teach this doctrine is very few. And seeing it is so hard to come by architectural perfection to-day it follows that the old buildings possessing such quality deserve preservation, except some new and unaffected need now demands a change.

It may appear that I have been at pains to prove what is already known; yet known it cannot generally be, for as Secretary of the Society for the Protection of Ancient Buildings I am troubled by many with an excessive regard for antiquity itself, by others who see no merit except in form and by

many another, each stressing some part of architectural unity as though in it alone perfection stood.

It may be held that my business is to do no more than tell a people who are agreed to admire ancient buildings what steps are taken in this England to protect them. That shall be presently done, but first I would plead that a proper awareness of the value that resides in these buildings is their best protection, and that an awareness wrongly stressed makes it possible for the intellectual acrobat to show folly, affectation, or false sentiment in their defenders and thus seemingly to prove the rightness of the destroyer. Too often beauty falls, not because it so deserves, but because a love of scoring points in controversy has exposed it to a specious, and plausible, but false attack.

. Being decided, then, that the preservation of a noble structure is desirable, it will be interesting to note how some of those who try to secure this object are apt to hinder its accomplishment by neglecting to consider the purpose of others who wish the building away. Instead of attempting to relate the question of retention to the healthy needs of mankind they give the iconoclast easy opportunity to score in wordy warfare. Blustering, they

cry 'vandal' and write sarcastically of 'improvements.' A balanced mind knows that right in such a case rests with *common sense*, and that *armed* defence and *warlike* attack equally disclose a weakness. Yet the conclusions of *common sense* are difficult to support in argument, for the factors on which they depend are many and the mathematical or argumentative mind in marshalling them inevitably omits some, or wrongly values others. By *common sense* then is meant that sense which is common in all the sense-approaches to a question. It may be described as the finding of 'digested experience' tempered, but not controlled, by reason. Thus the decision as to whether a building, once it is threatened, should be destroyed or preserved becomes more difficult, for the experts of either party are trained to think in verbal terms and are apt to build their conclusion from a species of inflated arithmetic.

Further, the minds of many men are at once confused by the use of certain catchwords. In the matter we are considering the word 'progress' should be subject to marked suspicion. It is a conjuror's word. When once it has been associated with a change, there are many who give up inquiry lest their fellows may call them obstructive.

The worship of this word, like the worship of 'tradition,' leads us awry, distorts our comprehension and harms the proper movement of life. Technical knowledge will increase and will be used to the benefit of man, without making temple sacrifices to this treacherous god. In the name of true progress, that is in the name of man's welfare, it is wise to make use of the goodly buildings, which bring across the passage of time virtues that they give freely and yet still hold to give again.

To make display of newly-acquired power is not without danger. Such power will fittingly show itself in time. True progress will not be denied. It is wise to beware lest pride in a new strength brings with it a result showing more vanity than sense. Without we take care, we find ourselves using a new strength for its own sake and not for man's.

The conscious Protection of Ancient Buildings in England has become necessary, then, not because any group of persons has set out to destroy them, but because man thinks in phrases and not in facts and also to some extent because society is supported to-day by a division of services. The second cause deserves some notice here. Some are appointed to work for the development of one

interest, some to consider other social interests only. It almost seems that we hope to reach sensible conclusion by setting men to oppose each other in the service of extremes. Were the Ministry of Transport, for instance, unchecked by the Ancient Monuments Board, very shortly no ancient (and for that matter still sturdy and durable) bridge would remain, and if the Ancient Monuments Board were in complete command no building of considerable age would be allowed to be changed did common sense ever so strongly demand it. The fact is that the careless development of building in the nineteenth century established a one-sided thoughtless tradition, which teaches that old things are useless, or, at best, only to be tolerated for the edification of some, whose proper place was held to be leisured corridors of life. Those who were then active in building business, careless of all else, allowed those of assured means to assume that culture belonged to them alone. They watched with indifference archaeologists attempt to display their learning by making in stone, mortar, timber, and lead, life-size restorations of the mutilated, yet vital, remains of real architecture. First, individuals, Etty, Stothard, Emmett, and others, protested at this

misuse of Ancient Treasure, and later, William Morris, his friends and their thoughtful contemporaries, formed a society to gain for our antiquities an intelligent and proper treatment. At once the persons who represented one or other extreme point of view joined issue. The restorer gained the support of the destroyer, and the churchman found himself joined with the 'hard-fact' materialist, in calling this new band impractical sentimentalists. They knew well what epithets would be accepted by the unquestioning public, and it has taken about fifty years of steady reasoning to gain for the principles of the Society for the Protection of Ancient Buildings the acceptance of those who consider such matters impartially. One effect of this movement, an effect that was perhaps more the indirect result of the Society's work than an object consciously sought, was the strengthening of the Ancient Monuments Acts. This Act in its present form is still weak, if it be judged by the direct power of the Ancient Monuments Board to forbid the destruction or alteration of some building of national importance; but it provides means for the very able staff of that Board to get in touch with public authorities who contemplate such changes, and by advice based on sound

knowledge, to influence their decisions. It is by the development of these means rather than by any autocratic power of veto in these matters that the able servants of the Board are most likely to save for the future the monuments that posterity will be proud to possess. It is fitting here in this connection for me to remind the public of the great knowledge and persuasive wisdom of Sir Charles Peers, the present Chief Inspector of Ancient Monuments.

It appears to-day that none can serve the interests of the nation in this matter better than by using the influence he possesses with public authorities, both central and local, and with private persons, to refer such matters to the Ancient Monuments Board. Thereafter these authorities, with better knowledge of the values to be lost and gained, will exercise their freedom and decide the fate of an old and acknowledged work of architecture. As time passes also and as the weakness or the uses of the Ancient Monuments Act become known, and the results of its operation understood, opportunities will come to urge on Parliament amendments of the Act which will further benefit the nation.

In the foregoing paragraphs I have written in

general terms of the values of noble architecture, I have referred to the history of the growing interest in this matter and I have mentioned the name of the Society for the Protection of Ancient Buildings. It will be no bad thing briefly to restate them here. And lest the lone position, which that Society so aggressively held for many years, should have become associated with heated argument and right vigorous language by those who suffered exposure by these means, I would ask them now to consider what follows, not as the battle-cry of an opponent, but as the opinions of the thoughtful, to be examined, considered, and either accepted or modified as honest and wholesome feeling directs and reason allows.

The Society holds that old buildings possessed of the values I have attempted to describe above are an asset to a nation and deserve its respect and careful treatment, whether that care and that respect is officially or privately given. It holds that the reproduction of missing parts for academic reasons is harmful, and that aesthetic reason for such change is suspect—for who, remembering the contradictory opinions as to the 'looks' of things which successive generations held, can

reasonably suppose his own contemporaries less affected by passing fashion than those which preceded.

The Society holds that no prejudices as to the means which may be employed in the repair of an old building should hinder the use of any appropriate material that modern knowledge has provided ; it holds that a conscious revival of means and forms, being repugnant to reality, is ever to be avoided where old buildings are concerned. And it holds that no better thing can befall an old structure than its continued use in the service of man ; that the only qualification to this doctrine is when the value of the building, because of its associations or exceptional place in the history of English architecture, is greater service to the nation than the use, which demands for its own lesser ends an alteration injurious to the reality or to the material story of that building. The Society further holds that to aim at a parade of antiquity is harmful to these objects ; particularly is this so when ancient buildings are robbed of their roof coverings, of their timbers, or of their masoned stone-work to satisfy the ignorant fancy of the maker of a new building, or to gain for him the reputation of being ' a lover ' of things ancient.

The craze for the antique is a different thing from a sane appreciation of ancient architecture.

To fulfil these principles in practice the Society has developed technical processes suitable to the preservation of ancient structures, and others, according to their knowledge, have accepted or developed these methods. Differences in such practice exist within and without the Society, but it will be observed that where it has received careful and sympathetic consideration, ancient buildings suffer less loss of temporary beauty, or lasting interest, than where the ordinary practice of the building trade is unquestioningly applied. It is not that the builder's use is in itself at fault, but that in the different condition of repair work it cannot be applied without unnecessary loss to that which we all hold valuable.

The Rome that Niccolo, son of Crescentius, justly admired was not built in a day. Forum was added to forum, basilica to palace. Civic dignity, wealth and order grew, nourished by a dim respect for ancient buildings and ancient sites. With our greater knowledge and our greater power we are able, if we will, to produce a nobler grandeur than was Rome's : and we may do this by allowing the old buildings that exist and are good to remain,

being guided by them in our improvements. The growth of the nation is best served by using its ancient inheritance ; it will be ill served if the old is assumed to have no value except to sentimentalists or historians.









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